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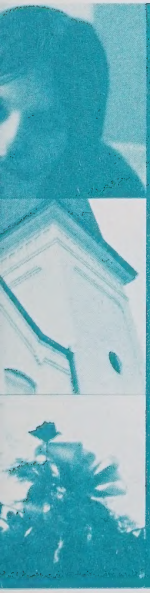

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We live in what has been called the "chemical age." Everyone has some stake in the nation's effort to deal with alcohol and drug dependence. Social policies for health, law enforcement, education, and community organization are involved.

Section by section the report of the Commission of Inquiry into the Non-Medical Use of Drugs will be available for study, discussion, and decision. The first document, on treatment, has been published. Attention of press, radio, and television has been directed toward the more controversial elements in this report. In the afterglow debate lingers over various treatment and cultural philosophies. Those involved in this discussion represent a relatively small, specialized part of the professional community.

Other sections of the Le Dain report, however, will be relevant to the vast majority of the population . . . those most likely to be affected. The recommendations together with the values, assumptions, and goals upon which they are based deserve full, informed public discussion. Only then will a strong link be forged between data and decision.

Mass media can serve in focussing on key issues. Future discussion, however, cannot be left by default to columnists, letters to the editor, and radio and TV talk shows alone. This Foundation has a responsibility to help ensure full and competent community participation in the discussion.

To this end, this quarterly—now in its eighteenth year—will continue to contribute to the exchange of authoritative information and experience. We will be joined by a monthly newspaper, which will report recent trends and developments in the alcohol and drug field. Both periodicals will shortly increase present circulation to more than 50,000 recipients in health, education, social service, and related fields. Together with our colleagues in clinical, community, and research activities our goal is excellence in information, understanding, and action in dealing with the chemical age.

editorial

Bound by BOOKSHELF BINDERY LIMITED, Ridgetown, Ontario

by Griffith Edwards

Planning for the

70's

Social Background to the Use and Abuse of Alcohol and Drugs: Professional Aspects

Faced with the suffering and immediate reality of yet one more patient confronting him in the morning's clinic, the doctor is once more for that moment immersed in the problems of the individual. The caring worth of medicine is that it invites this absorption. But practice of clinical medicine has for this very reason, as that doctor must today so often have heard, an attendant disadvantage. The clinic invites a limitation of vision, invites focus on the individual rather than the population, on the here-and-now rather than the horizon. The doctor finds himself uneasily asking whether by setting up treatment services rather than attempting effective prevention, society is not just assuaging its guilt and avoiding the larger issues.

The doctor may also find himself self-critically wondering whether the attitudes which lead society to set up

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Dr. Edwards is Head of the Addiction Research Unit, Institute of Psychiatry, Maudsley Hospital, London, England. Reprinted from *Proceedings 29th International Congress on Alcoholism and Drug Dependence*, Butterworth, Sydney, 1971. We are grateful to the author and publisher for kind permission to reprint a slightly shorter version of the article in *Addictions*.

treatment services are sometimes based on him and society (at his persuasion) entering into a conspiracy to pretend that effective treatment for the dependency diseases actually exists. A few years ago he was able to defend himself by saying that "clinical experience" showed that this or that treatment was highly successful, but in the era of the controlled trial these defences of a previous generation are now seen to be doubtful. Today, therefore, the practitioner who at society's behest treats the dependency diseases is not in a particularly happy position and feels himself more the man of the past than the man of the future. He suspects that in the next decade society will entertain the notion of investment in prevention or in research with some favor, while society's attitudes will swing away from faith in treatment.

The purpose of this paper is to look at some of the perplexing questions which must face the treatment specialist in the next ten years. If he looks up from his desk, takes a holiday from those everyday and ever-pressing problems of clinical practice, what does he see? Has prevention all the answers? Is treatment research possible and if so what are its priorities? Can treatment services be so organized as to reach the mass rather than the minority?

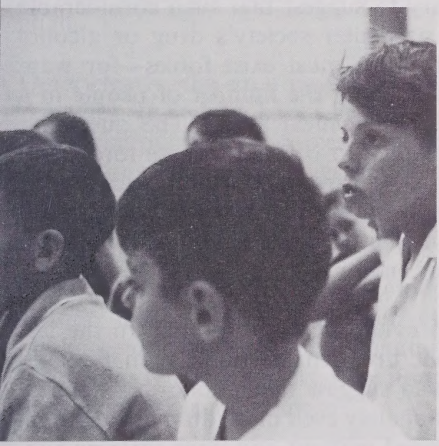
The inference drawn from the various pieces of evidence and several arguments examined in this review—to look ahead to its conclusion—will be in fact an optimistic one. In planning responses to the dependency problems of the 1970's, society should by no means devalue the role of the

"It has become fashionable to advocate education of youth as the real answer"

treatment professions. But the inference must also be this—continuance of faith in the place of treatment within the total plan is entirely conditional firstly on treatment research being accepted as an area where high scientific standards can and must be applied, and secondly on the treatment professional showing that his real concern is the provision of services for the community, rather than the building of clinics for the minority.

Has Prevention All the Answers?

In the last few years there has been a re-awakening of interest in the preventive approach to dependency diseases with quite considerable concurrent questioning of the sufficiency of the treatment approach to conditions of such epidemic proportions. It has become fashionable to advocate education of youth as the real answer, but such talk can sometimes seem to be incompletely thought out. The suggestion, for instance, that alcoholism could be prevented if children were "taught healthy drinking attitudes" ignores the fact that society is already such a successful teacher that the great majority of children will not become alcoholics, and the complementary fact that the very minority who are at hazard may be resistant to education, that resistance being rooted in experience of parental relationships, personality handicaps, culturally-determined coping mechanisms, social disadvantages, and other matters of profound complexity, all probably quite impervious to any known powers or skills of the educator.



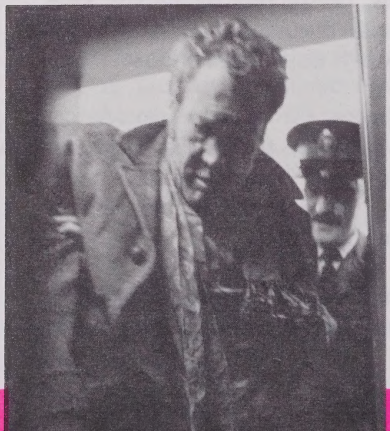
Educational methods have often paid scant attention to what is known of the psychology of attitude change, and there has been confusion as to whether education is to be achieved by the mere cognitive business of offering information or by something more subtle.

As for evaluation, research in this area is singularly beset with problems—paper-and-pencil measurement of attitude change after a class-room

lecture must bear a totally uncertain relationship to drinking behavior twenty years later. Long-term prospective studies of large populations are expensive operations and no study of this sort without controls is of much value. To ask that educational efforts should be properly evaluated may indeed be to cry for the moon, but meanwhile we should note that as regards the value of any educational investment only a strictly agnostic position is today justified. Education is of even less certain worth than treatment.

Does this mean that hope of prevention is inevitably ill-founded? Historical evidence seems on the contrary to suggest that such considerable shifts have at times occurred in a particular society's drug or alcohol problems as to make it certain that there must exist forces—for want of a better word—that can affect profoundly the number of people in a society who fall victim to problems of chemical abuse. The questions, then, are whether education can be shown to be one of these forces and whether we can indeed hope to identify, control, and exploit such forces, as opposed to being merely passive witnesses of inexplicable and uncontrollable change of an order of magnitude that must make both the clinic doctor and the hopeful educator envious.

Arrests for drunkenness in Britain provide such an example. In the last hundred years the incidence of public drunkenness offences in England and Wales has fallen. The figures also suggest that public drunkenness among women has decreased proportionately even more dramatically than drunkenness among men. This happened without any large-scale or concerted health education campaign; even the most optimistic clinician could not interpret it as due to the efficiency of treatment services in the twentieth century, and it must therefore be seen as evidence that, whatever we do in the clinics and whatever the efforts at education, we are being carried along on the tide of social history.



Conversely, the number of reported cases of heroin addiction in subjects aged under 20 years had risen dramatically. Also, there has been, over the last ten years, a rise in convictions in which cannabis was involved.

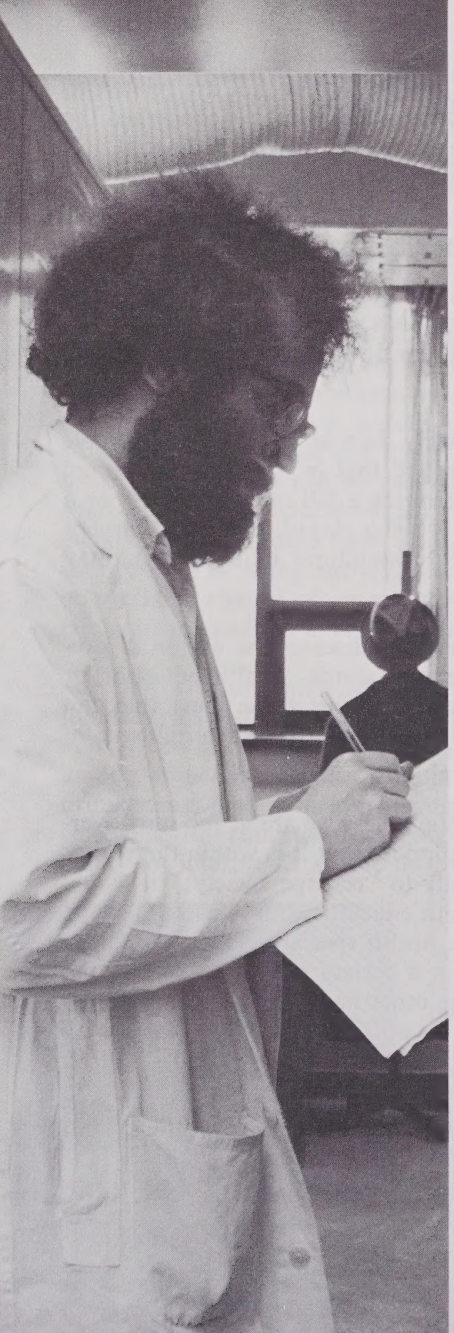
Are there available any insights at all into the forces that are related to these changes in social pathology? As far as drunkenness is concerned the speculation is that with the worst consequences of the Industrial Revolution slowly overcome, the whole nature of English city life has changed. The English working man is more likely to be found in the evening sitting at home in his council house watching his television set, than going off to the gin palace to escape the squalor of his home and the hopelessness of his condition. How charming it would be if the message were as simple as this—right grossly obvious social wrongs and all will be well; social problems fade away in a new dawn, color television curing all ills.

Quite clearly, the drug figures immediately dash all hope of such simple remedies. It had probably best be admitted that in trying to understand the background social forces which determine a fall in drunkenness or a rise in drug addiction a guessing game is being played: there is an urgent need for research and particularly for transcultural inquiries that may throw light on these matters.

Does all this mean that with the dependency diseases the notion of prevention must at present be seen as empty words—health educator or public health specialist pitting puny forces against those inevitable and invincible trends in society which are the real underlying determinants of prevalence of chemical abuse?

The conclusion need not be so pessimistic unless we are at the start over-optimistic. We will be frustrated if we suppose that it is within the realms of possibility for any profession abruptly to "reshape society;" it would be too hopeful to suppose that the health educator could have prevented the Industrial Revolution or the public health specialist have curbed the consequences of unfettered capitalism in a society whose whole dynamo was the entrepreneurial spirit. If, on the other hand, the starting point is no more grandiose than the claim that it is possible to identify many small but important individual aspects of society's organization which bear on the likelihood of chemical abuse and which are proper and possible targets for immediate action, then we can feel more hopeful. *The clinician who treats the alcoholic has for long known that treatment aims must be realistic; the same is true when it comes to treating society.*

The inferences would seem to be these. Prevention in terms of "educating



our youth" is of totally uncertain worth. "*Reshaping society" on the grand scale is a proper dream and proper enterprise for any individual, but as next year's program for the preventive health expert it is folie de grandeur*. Prevention in terms of small, practical attempts to alter the environment in certain specific ways makes much sense. Recommendations along this line can be a continuing contribution that social worker or doctor might make as an intelligence agent who advises society as to where practicable preventive effort may be focussed. And finally, although rational prevention has perhaps much to offer, the casualties will still occur—society will not, within the next ten years, be able to dispense with the treatment professions.

Research Investment and Treatment Research

The doctor who is trying to run a treatment service on an inadequate budget is not rare. It is not surprising therefore that he may find himself casting a jaundiced eye on some aspects of society's research spending. In so doing he is neither being mean-minded nor reactionary—he readily acknowledges the importance of adequate research investment, and he knows that some of the most important research has no prospect of immediate practical pay-off.

"When research findings that might bear on social action are available, action by no means always follows"

One of the complaints of that critical doctor is that in planning social action, society still does not know how to use the research worker. More often, he ought to monitor the results of legislation that implements particular social policies.

Another aspect of the same criticism is that when research findings that might bear on social action are available, action by no means always follows. Research in Britain indicates that the social origin of much chronic public drunkenness is the young Irishman or young Scot emigrating to London as an unskilled laborer, his social controls removed, money in his pocket, no healthy or attractive leisure alternative to the pub, and no invitation to spend his money on much other than beer. When will the social preventive programs suggested by the research be piloted? The doctor witnessing all this from his clinic or his community may sometimes feel that what is needed is not always more research investment but a greater willingness on society's part to capitalize on the already available findings.

Society's reaction to the treatment professional who animadverts on society's lack of skill as a consumer of research would no doubt be to suggest that the doctor should return to his own lathe and offer some statement as to the place of treatment research. It would then at the outset have to be admitted that, of all aspects of research on the dependency diseases, it is treatment research that is least well-developed and most frequently falls down on methodology. To what aspects of treatment should research energies be directed?

Treatment of the dependency diseases has its *paraphernalia* and its *essence*.

The word paraphernalia is not used disparagingly, but clearly there is a sort of core of treatment being practised whatever the super-added physical methods or particular regimes or programs. The alcoholic may be offered disulfuram or given aversion therapy, may be prescribed tranquillizers or antidepressants, may be given a week or three months in hospital or simply treated as an out-patient, may be introduced to Alcoholics Anonymous or left to find his recovery without such help. The drug addict can be given methadone or be treated within a therapeutic community or sent to prison or put on parole. Whatever the paraphernalia, the common core of treatment is advising the patient totally to abstain from drink or narcotics, inviting him to review the present pattern of his social existence and holding up to him the advantages of abstinence and the disadvantages of continued chemical abuse, suggesting to him various strategies that will help him to get through life without his favored chemical, hoping that he will have a good opinion of us and be moved by our advice.

On the paraphernalia there is already some research that carries conviction and the general trend of the evidence seems to point to the conclusion that claims for the value of any specific treatment seldom withstand the rigorous scrutiny of a controlled trial. Emrick (1969) on the basis of a very careful review of the literature concluded that disulfuram and aversion therapy are probably only of marginal value in the treatment of alcoholism, while claims for the efficacy of newer aids such as LSD and metronizadole are equally insecure. Hypnosis has, in some countries, been widely used as an adjunct to treatment of alcoholism; convincing evidence of its benefits is not forthcoming. The value of admission as opposed to out-patient care of alcoholics has been questioned. As regards treatment of drug dependence, controlled trials which evaluate specific treatments appear to be lacking, though one may suspect that the influence of a methadone program on the otherwise-expected social maladjustment of the heroin addict should be accepted as prima facie evidence, and Vaillant's careful retrospective reconstruction in 1966 of the impact of various handlings on the outcome of heroin addiction deserves note. It seems fair to conclude that in general we have no very strong reason for supposing that specific methods usually have anything like a considerable impact on the natural history of the diseases. The paraphernalia are not to be dismissed as unimportant, but there is reason for supposing that no specific treatment has yet been discovered of such power that we can at this stage afford to neglect what has been referred to above as the essence.

The essence of the treatment probably has not changed over something approaching two centuries, but what is relatively new to the scene is an investigatory scientific discipline which allows measurement of the efficacy of psychiatric treatment. The urgent task today is to apply scientific assessment methods to this essence which has for so long been employed in the treatment of the chemically dependent person. It may to some seem unnecessary and to others impossible to bring harshly objective methods to bear on the study of anything so sensitive and complex as the doctor-patient relationship and the communications which the doctor makes or implies by nuance to his patient. Everything points to the fact that the treatment professions can go wrong and continue to be wrong unless there is willingness to submit long-hallowed therapeutic approaches to the cold scrutiny of neutral science.

Treatment always implies attention to social setting and social problems, as well as words which aim to bring about the hoped-for attitude change; social and psychological approaches inter-react. Within these terms every doctor and social worker believes that what is said to the patient is important. But all who engage in treatment know that sometimes words work wonders while sometimes they fall on seemingly irrevocably deaf ears. Are we to go on regarding success or failure as just the luck of the draw, the presence or absence of some mystical quality tautologically named

"motivation?" Or could research give such sharpened understanding of the processes involved in attitude change that success becomes more probable? Can the essence be identified and refined?

Only recently has experimental social psychology offered a framework of theory which provides an apt language for discussing those phenomena which the clinician has for so long been observing. Ambivalence and denial are, for instance, translatable into the language of dissonance theory. Research on psychotherapy in general is much further advanced than a decade ago. From various directions there is this confluence of ideas and techniques which should make it more feasible than ever before to set up clinical experiments which take as their starting point the physician's practice and experience.

If society is adequately to meet the problem of dependency disease in the coming decades, and if the treatment professions are going to be given a proper place within the total plan, methods which are not shown to be of value cannot be persisted in merely because of tradition, inertia, the therapist's emotional set and resistances, or the politician's expedience. The treatment professions—and society—must increasingly see scientifically-competent research as providing the only criteria on which the value of any approach (paraphernalia or essence) is to be judged. Growing acceptance by the treatment professions of the philosophy that insists

that research is not an optional extra, but part of all treatment endeavor, could provide society with the best assurance that treatment is still a proper part of the total response.

The Organization of Treatment Services

Given that as yet there are certainly no magic treatments, given too that the next ten years should see very careful evaluative research carried out on the present treatment methods, with the possibility of rejection of some of what is at present practised, there is still the fact that tomorrow's clinic brings its patients and that "we have to do something." Most of us will suspect that research will ultimately show that doing something is better than doing nothing and will decide meanwhile to get on with the job of offering the best treatment at present known, to the patients who consult us. But the fact must be faced that the patients who consult us are probably the minority of people who need our help. Treatment ought to be concerned not only with treatment methods but with the organization of treatment services. It is no good having the most admirable clinic if nine out of ten people in the surrounding streets who need its help simply walk by its doors.

The organization of services for treating the alcoholic or drug addict must depend partly on the bigger question of the slice of the total national economic cake that is going to be given for medical services. Where spending on health services is insufficient, spending on less popular health problems is likely to go to the wall.

Those particularly interested in alcoholism or drug addiction are likely to criticize society for the neglect of dependency treatment services and to campaign for more money to be spent. They are likely to be met with the argument that much else besides alcoholism and drug dependence has call on the money available for treating the sick. Although there are many alcoholics there are many more people suffering from other forms of disturbed psychological functioning and few psychiatrists to go round. Perhaps Manhattan has enough psychiatric manpower to treat a very small proportion of its alcoholics, but many other parts of the world have only sufficient psychiatrists to point up the total self-defeat of any approach to the dependency diseases which sees the answer in terms of the specialist sitting in the hospital clinic. The specialist will have to take on the role of *agent provocateur*, mobilizer of community resources, exploiter of what already exists, and of managerial and business expert who makes sure that resources are used with the maximum efficiency.

Society uses shaky criteria to determine the priority of its spending—lavish outlay on spare part surgery with pitiful neglect of the vastly important

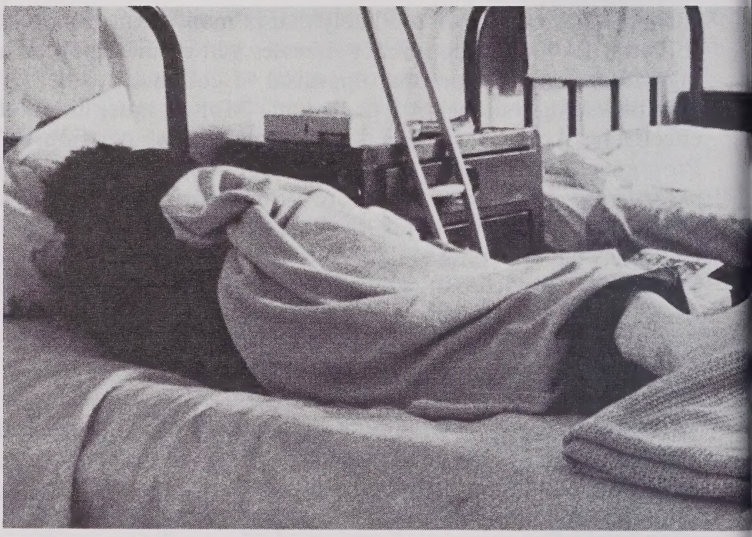
"Society uses shaky criteria to determine the priority of its spending – lavish outlay on spare part surgery with pitiful neglect to the vastly important chronic illnesses"

chronic illnesses. It is all too likely that in many countries the stigma which still attaches to the dependency illnesses will be the determinant of spending rather than any rational appraisal of community needs. There never will be enough money to go round. Money must therefore be spent effectively. A report by the North American Association of Alcoholism Programs (1966) has stressed that *not only treatments but treatment programs must be evaluated.* Before a community sets up a service, someone has to state what he hopes that service will achieve and the objective measures that are going to be used to determine whether hopes are fulfilled. Otherwise, the nature of man is to bring into being a treatment service in which not only cash but ego is invested to persuade himself some years later that a fine job has been done and to pick *post hoc* criteria that give us all the greatest reassurance.

The point that has to be made here is simple but important. The day has gone when the treatment professional's only responsibility was to produce an effective treatment: in future, society's attitude toward him is likely to be marked by an increasing insistence that the product is not only manufactured but also distributed.

The Treatment Professions—What Future?

To ask for rationality in any aspect of health planning is to ask a great deal. When the problems involve not only health departments but law enforcement and many other agencies of government, the demand is particularly ambitious. There is no likelihood of society being able to meet the dependence endemics and epidemics of the next years by policy or investment that is haphazard and catch-as-catch-can. Preventive measures, treatment and research, all require integrated planning and establishment of priorities. Research is as relevant to the actions of the legislator as to the procedures of the clinic. Within this planned and total response, the treatment professional must find his future place. If society is to have confidence in him, he will have to be more self-critical than in the past. He will have to accept that he operates within economic and political realities. Any society that is so timorous and incompetent as to seek his connivance in running inadequate clinical services that offer unsubstantiated therapies to an uncertain minority of potential patients while down the road more patients are created, is likely to win only his strictures.



HELP RATHER

Mr. Bell is Queen's Park reporter for *The London Free Press*. This article is reprinted, with changes, through the courtesy of *The London Free Press*.

by Del Bell

Tom is sitting in the long, narrow common room of a one-time firehall converted to a detoxication centre. In street language, that's a place to dry out. The detoxication centre also—and this is perhaps more significant—acts as a referral centre for self-help groups and all other agencies that try to help alcoholics kick their destructive habit. Tom has been in the only other detoxication centre in Toronto, the one over on Seaton Street,

THAN JAIL

Detoxication Centres: A Public Health Answer to a Legal Problem

three times. He's been in this one twice, in a clinic three times, and at the Salvation Army's Harbour Light Centre at least twice. "This one's the best of them all, you know," he says with the conviction of a man who knows.

Tom has a room nearby. He drops in at the centre during the afternoons to play cards and talk and sip a coffee and have a pipe. "This way is better, know what I mean? You ever been in a drunk tank?" Tom asks. "Now, you don't get locked up with the rest of the criminals. You're not classified as a criminal. To a drunk like me, it makes me feel better, you know? I'm not treated like a criminal, I'm treated like a human being." Others aren't saying anything. There is a nod here and a thoughtful, withdrawn look there that makes it obvious that they understand and agree.

It is this matter-of-fact acceptance of them as human beings with problems, a willingness to listen and try to help, and the end of the revolving door syndrome—drunk, jail, drunk, jail ad infinitum until some judges refused to send people like Tom back—that seems to be making a difference. No one, including director Bill Petersen, a pudgy, 41-year-old with an impressive amount of both dedication and know-how, claims the detoxication system will wipe out the problem called the chronic drunkenness offender (CDO) in clinical circles. If nothing else, it is an immensely more humane way of treating what Mr. Petersen calls inebriates than the drunk tank. It is breaking new ground in rehabilitation even though this is something you have to measure more in human terms than in statistics.

At Seaton House, a 600-bed men's hostel run by Metro Toronto Social Services, a 14-bed detoxication unit was established in September, 1970. In its first year 1,300 men stayed for an average of four days. It's entirely voluntary; there is no compulsion to stay or leave. If a man wants to hit the street again first thing in the morning, he has only to walk out the door. But 75% agreed to stay longer than 24 hours. Only about 25% were repeat customers of the centre.

Over at the white firehall centre at Ossington and Queen Streets—just opened last fall—Tom is waving a Manpower form and urging you to read it. The form says he has an interview with a TV repair shop. "I can make $150 a week. That shows you we're not all bums," he says with a hint of a grin at his companions. Of course, he hasn't got the job yet and he may not get it. He is 51, but, in spite of the lost years, doesn't look that old. He has done time in a reformatory. ("Liquor used to be a criminal offense you know," he says.) And there is the booze. "I used to have my own shop," Tom says. "Maybe he'll remember me as a drunk . . ." His voice trails off for a moment.

The important thing is that he is trying to get a job. The last time he worked

was six years ago. And that lasted a week. Mr. Petersen says Tom hasn't had a drink for a month. He can't wander into the centre to pass the long days of waiting if he has been drinking. That's the deal. But, ironically, if Tom does get drunk, the door is open and the process starts all over again. Mr. Petersen, who is responsible for both Toronto detoxication units, is keeping his fingers crossed Tom will make it this time.

Both detox centres in Toronto have close ties with hospitals—Seaton with St. Michael's Hospital and Ossington with Western. They are reasonably close to but not physically attached to the hospitals, precisely the arrangement suggested by a government interdepartmental committee named back in October, 1970. H. David Archibald, director of the Addiction Research Foundation—a member of that committee—summed it up this way in a talk last fall to the Ontario Hospital Association Convention: "the social health system that we have recommended calls for a series of special detoxication facilities that are geographically close to and have a direct working relationship with a general hospital . . ."

Western Hospital has taken on legal responsibility for the old firehouse, holding the lease and taking insurance in the name of its corporate entity.

The hospital also provides the main meal of the day from its kitchens. The nearby Ontario Hospital at 999 Queen provided the 18 iron-rung beds, blankets, and sheets. It does the laundry for the centre as well. It's a patchwork co-operative venture and everybody is more than happy with the way it's working out.

Research experience has shown that only about 5% of the people taken in by the detox centres require medical treatment and that most of them can be handled as out-patients. This means the pressure on already overworked emergency departments is eased by a detox centre. However, there is still some hostility toward the centres in hospital administration circles where officials don't know what to expect.

Last July, Attorney-General Allan Lawrence introduced legislation affecting detox centres (passed but not yet proclaimed). At the time he said the Province would spend $4.5 million over the next three years on detox centres, halfway houses, and rehabilitation farms.

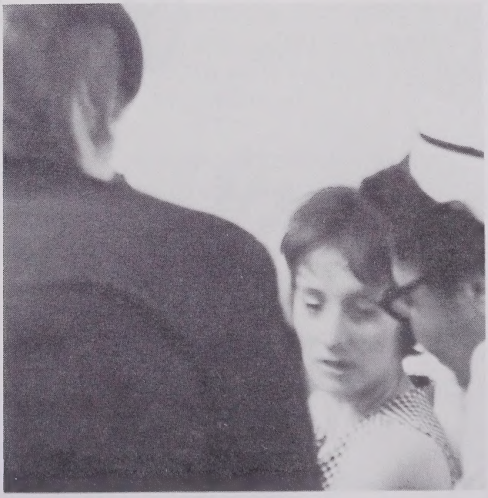
Hospital officials are worried that the act, if it's followed to the letter, will mean that they will have to set up centres inside their walls. And to put it plainly, they're concerned because they don't want drunks in their hospitals. There is also some concern that hospitals may get stuck with financing the day-to-day operation of detox centres—even if they are located geographically outside the hospitals.

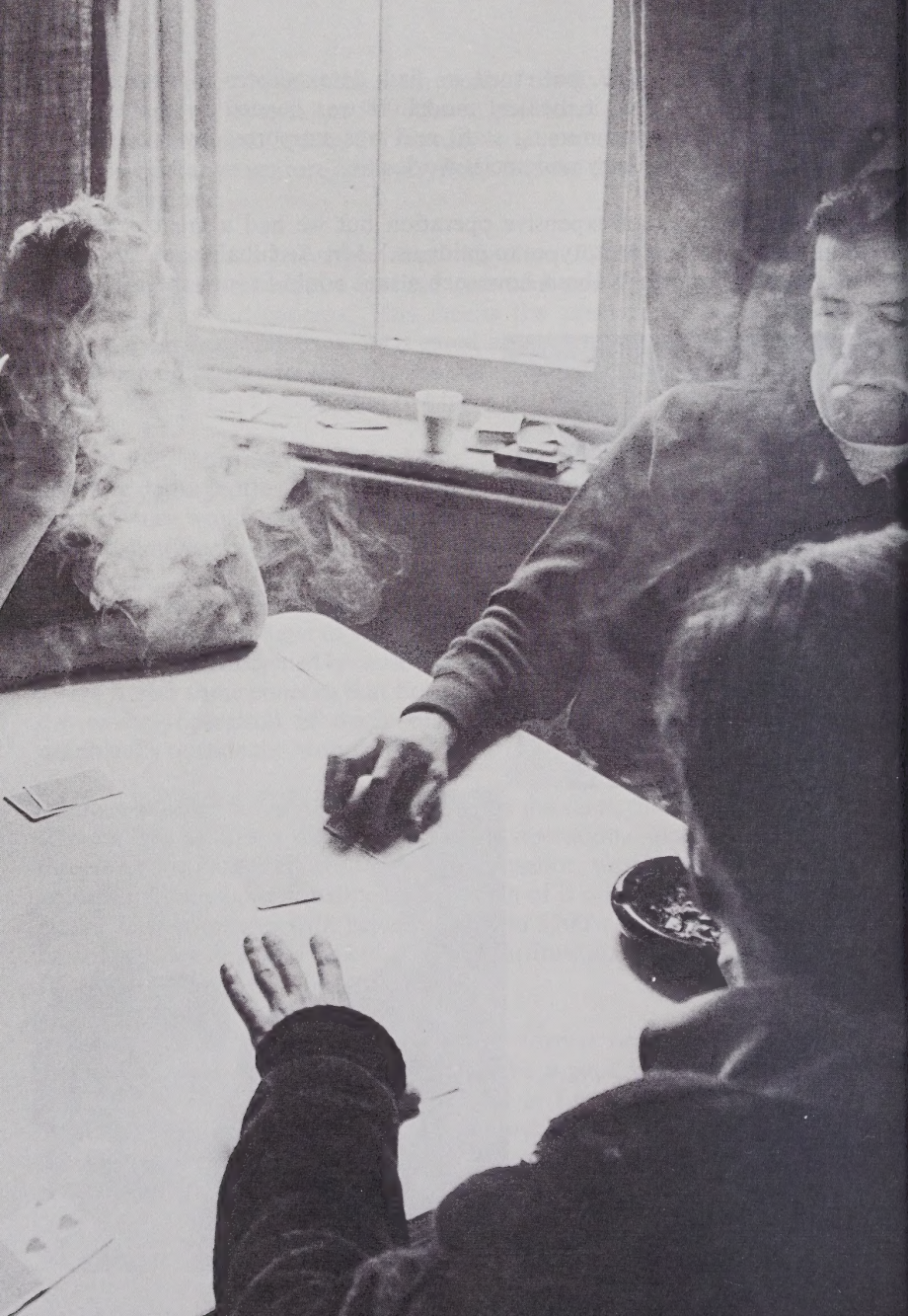
There is another dollar factor Mr. Petersen points to that can't be ignored. It costs $11 to $15 a day for the centre operation—including staff (the director, four para-medicals, and one counsellor, supplemented by trained volunteers), meals, and maintenance (much of it done by the crew "drying out"). That compares with between $75 and $100 a day for a hospital bed or about $35 a day for a bed in a mental institution. It's even cheaper than the $17.30-a-day tab at the Don Jail.

Mr. Petersen says that he doesn't think formal ties with hospitals are absolutely necessary but that there must be a good working relationship. The arrangement with Western Hospital is fundamentally one of convenience. A.R.F. pays the operating costs of the two centres (about $70,000 a year for both) but will ease out when the government moves in with its program probably later this year.

In the beginning, A.R.F. patterned its first detox centre in downtown Toronto (in 1969) after a medical model. It was headed by a medical director, had a full-time nursing staff, and was supported by specialists in areas such as psychiatry and social work.

"Obviously this was an expensive operation but we had a great deal to learn and we had few prototypes to guide us," Mr. Archibald said. "However, we did learn much about how such a unit could fit into the existing





community health and social services and what such a system would mean to hospitals in terms of staff and physical facilities." It was out of this experience that the A.R.F. learned that centres could be staffed by nurses and non-professional people so long as a doctor was available for consultation when required. "Therefore," he told that hospital convention, "placing the detoxication centres close to, but not in, a hospital would preclude the very costly and wasteful situation of having medical staff permanently on the site."

The committee recommended 125 detox beds for Toronto—mainly in the downtown area—and special facilities including detox centres and halfway houses for all the major judicial districts in Ontario where there are 1,000 arrests or more for public intoxication.

Whether you're talking to the police or the people they're designed to help, the response is the same: they can't come soon enough. "It's a godsend for the drunks to come here instead of jail," says Tom.

About the only losers, grins Mr. Petersen, are the jails. "Three-quarters of the work inside the bigger jails was done by the alcoholics." For years, the butcher in the Don was a regular visitor. He wouldn't stay out for more than a couple of days at a time in case someone ruined his knives, Mr. Petersen recalls.

One of the really interesting things about the centres is that there has never been any violence—not a single fight—as about 3,000 men passed through their doors in the last couple of years. "In fact, we have yet to have our first piece of furniture broken," says Mr. Petersen.

The detox centres symbolize a major change in our social philosophy, says Mr. Archibald: one reflected in our willingness to consider alcohol abuse as more of a public health problem than a criminal problem.

The Therapeutic Community in the Treatment of Adolescent Amphetamine Abusers

by Jack Kaplun and Robert Brook

am my problem

In the past several years, results of research studies along with valuable insights provided by informed therapists have revealed a number of characteristics common to adolescent abusers of amphetamines. In general, these young people are found to be passive-dependent, resentful of authority, impulsive, and manipulative. They are characteristically besieged with conflict, laden with guilt concerning their past behavior, emotionally crippled by latent hostility and aggression, and thwarted in their development by lack of self-esteem. These young people relate to others in an egocentric, childlike fashion and are unable to establish and

Mr. Kaplun is a Psychometrist at the Addiction Research Foundation's Residential Treatment Centre in London. Dr. Brook is the Director there.

sustain positive relationships. Cognitively, they are masters at rationalization and self-deception. In many cases they can be described as pre-psychotic or sociopathic, characteristics which predate drug use. The amphetamine abuser can be seen, then, as an inadequate and distressed individual who hides behind a drug-induced facade of power and well-being. Drug involvement tends to sustain and promote this illusional state which the abuser maintains, consciously or unconsciously, in order to offset confrontation with his real self.

If the facade is stripped away, the illusion consequently destroyed or impaired, underlying realities, among them feelings of loneliness and emptiness become evident to the person in a most vivid and stark manner. The possibility of these realities emerging and the intolerable prospect of having, as a result, to look honestly at oneself, is one that the person avoids at all costs.

However, over time, the "drug solution" proves to be an unsuccessful means of keeping the self suppressed: inklings of reality eventually seep through, and even massive amounts of chemicals cannot obliterate these feelings. At this point, the individual begins to realize that he can no longer fool himself and he will usually make some effort at self-help. He does so on the assumption that if he stops taking drugs his problems will vanish. These efforts usually prove abortive, since the person inevitably finds himself caught in a vicious circle composed of his own rationalizations and self-deceptions. He fails, in fact, to see that his emotional and psychological problems predate his drug use. He is likely to discover that he does not have the resources to pull himself out of this pathological cycle. When this

"The point of view that sees the drug abuser as sick, in the medical-psychiatric sense, tends to reinforce his belief that it is drugs, and not personal irresponsibility, that are his problem."

realization comes, and when there seems to be no way he can deal with his mounting feelings of desperation, the drug abuser is forced to acknowledge to himself his dire need for stable people and help.

Traditional Modes of Treatment

Unfortunately, traditional modes of psychotherapy available to drug abusers have been as unsuccessful as the abusers' own attempts to help themselves. The three principal forms of treatment—outpatient clinic, general hospital psychiatric unit, and special drug unit in the psychiatric hospital—have failed to make meaningful inroads into the psychopathology of adolescent drug abuse. There are several reasons for this failure.

First, traditional modes of treatment fail to jar the drug abuser loose from the countless defensive systems, negative attitudes, and distorted perceptions which cultivate and nurture a self-defeating life style. Second, by failing to penetrate this pathology, they never bring the patient to a stage where a consistent reality-based regimen can be initiated. (We feel that reality therapy[1] is a necessary tool in breaking the drug abuser's self-defeating cycle.) Third, the point of view that sees the drug abuser as sick, in the medical-psychiatric sense, tends to reinforce his belief that it is *drugs, and not personal irresponsibility*, that are his problem. This false reassurance serves only to bolster the myth that when the drugs are gone the problem is gone. Fourth, the outpatient setting cannot provide sufficient control over the patient's social and physical environment. The positive inputs of therapy are not powerful enough to outweigh the negative ones of continual association with the drug-oriented peer group. Consequently, what is accomplished in the therapy hour can easily be undone during the hours he is away from the therapeutic setting. Although control is available in the hospital setting, it is not used to advantage. Generally, treatment is limited to brief contacts with a psychiatrist or chemotherapy. (Efforts at behavioral control through chemotherapy simply change the drug of choice and reinforce the patient's dependent

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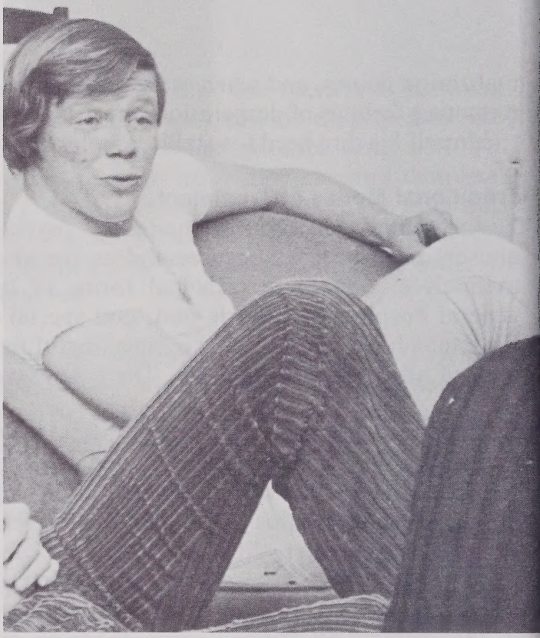
[1]Reality therapy is predicated upon the three psychiatric "R"'s of Right-wrong, Responsibility, and Reason. See: William Glasser, *Reality Therapy: A New Approach To Psychiatry* (New York: Harper & Row, 1965).
Because the abuser's habitual problem-solving technique is one that attempts to deny the realities of life by living in a world of dreams, a therapy which consistently and continually forces the individual to look at life as it really is, is necessary in helping him to adjust to the point where he can become reintegrated into society in a productive way.

"The most plausible alternative is a peer-oriented therapeutic community"



traits.) Furthermore, while on the ward, the patient continues to act as he pleases with few consequences. All too often, attention is restricted to handling physical and psychological crises without appropriate attempts to teach the person a new way of life. Imprisonment, an alternative to hospitalization, has proved equally ineffective as a means of treating drug abuse. The static and stultifying environment of a prison can by no means provide the type of learning experience which is necessary in enabling the anti-social, drug-abusing adolescent to learn to cope with a dynamic and complex society. The prison life style, in fact, usually reinforces that of the drug sub-culture.

We believe that the most plausible alternative in the field of drug abuse treatment is residence in a peer-oriented therapeutic community. Factors such as control consistency, "maximum-contact-with-reality" approach to living, and a drug-free environment seem to be necessary to effectively treat drug abusers. It is around these characteristics that the peer-oriented therapeutic community is built. Many different types of disordered people have been treated in such settings. However, the main thrust has been in the area of addictions, and this is reflected in the establishment of programs

such as Synanon, Daytop Village, Odyssey House, and Phoenix House. The characteristics inherent in this approach provide the therapeutic tools and setting necessary in treating the drug abuser.

The themes, stages, and processes operating in these self-help programs for drug abusers are essentially similar.[2] There are three main themes underlying treatment in any therapeutic community. One is acceptance of the fact that the person himself is responsible for the disastrous state of his social, emotional, and physical life. Consequently, he will have to learn to be responsible for himself and to act responsibly toward other people. Another is that he must face himself and others honestly. The third is that experiencing self-esteem is contingent upon discovering something to trust and believe in, and working toward its actualization.

These themes are actualized through encounter group experiences. It is in

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[2]Synanon is an exception in terms of the re-entry stage. They circumvent return to the community at large by viewing Synanon as the only sane society. Synanon, then, becomes a life-long commitment.

the encounter group, the backbone of the program, that the person must face himself and reality via the constant challenge and scrutiny of his peers. Involvement in a somewhat hierarchical series of treatment processes helps the individual to realize the treatment goals.

The Neophyte

Observation of the new resident's everyday performance in a closed and controlled setting provides the ex-addict peer group with a means of identifying the emotional and cognitive patterns which have led to the neophyte's maladaptive life style. A closed setting, then, is a prerequisite to treatment in the therapeutic community. The neophyte's awakening to the fact that "I am my problem" is the first goal in the treatment process. Encounters, especially during the initial stages of treatment, consist largely of continual exposure of self-excusing behavior. Furthermore, such confrontations challenge the person to meet responsibility. These confrontations and challenges are usually met with resistance by the newcomer who defensively maintains adherence to the street credo that "other people or my environment have caused my problem." However, the work ethic—strongly subscribed to in the community—soon provides evidence to the newcomer that he is directly and actively involved in contributing to his own circumstances. The community philosophy of "no free lunch" clearly means that any privileges granted to an individual will be a consequence of his fulfilling assigned responsibilities. Manipulative devices such as silent contracts with other residents or conning others into doing one's work are easily identified by the peer group, and confrontation surrounding them is immediate. The group's effort is directed toward showing the new resident that his style of operating is parasitic. For perhaps the first time in his life, the resident begins to feel what it is like to pull his own weight and to interact as an integral part of a goal-directed community.

As he proceeds through the initial treatment phase, he experiences more and more the reality of accepting the consequences of stupid behavior. Each attempt to use an old manipulative device within the community leads to a cul de sac; eventually the continual reality-based confrontation forces the individual to realize that he is the active participant in shaping his circumstances.

The probings in encounter groups during the initial stage are aimed at establishing and sustaining positive behavioral controls and restoring feelings to a level of awareness. In order to reach this state, the person will

initially express feelings of hostility and aggression. These are eventually superseded by his deeper and more real feelings. Honest and open self-other confrontation in an environment of warmth, positive regard, and concern promotes self exploration. Once the resident becomes attuned to openness as a successful way of dealing with his problems, he becomes more aware of himself and the effects of his behavior on others. He now begins to feel his own strength; the need to behave in a self-sufficient manner replaces his previous tendency to live a parasitic existence. His drive, then, to explore this newly discovered way of living prepares him for the second stage of treatment.

stage 2

Here, the psychological probings take on a different look. The encounter group becomes the setting for a more sophisticated inquiry into the nature of his real needs and feelings. The discovery that he needs to be loved, to love others, and to feel worthwhile contrasts sharply with his street values. A great deal of pain is experienced in talking about and looking honestly at the years wasted by suppressing these realities. The individual is not allowed, however, to dwell on his negativity and lose himself in self-pity. The group helps him direct his concerns to the here-and-now. The group guides and supports him in his efforts to actualize and deal with new-found feelings. Failure, frustration, love, loneliness, guilt, and conflict are handled openly and realistically. The person learns a problem-solving approach to life and, as he becomes more adept at problem solving, he is better prepared to face and meet the challenges of reality.

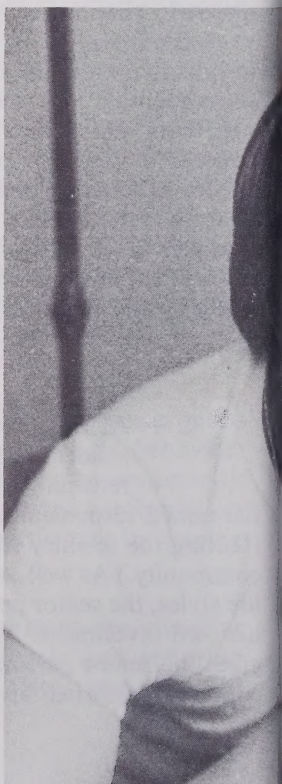
stage 3

At this point, the treatment is one of helping to prepare the resident for re-entry into society. Along with the privilege of returning to the larger community via education or work comes the added responsibility of serving as a role model for newer residents. (During the re-entry stage, the senior resident still lives in the therapeutic community.) As well as helping new residents to change their self-defeating life styles, the senior person has an opportunity as a role model to reassess his own investment. Interacting with the drug abuser fresh off the street gives the senior person a clear reflection of his past way of coping. The continual reaffirmation of his investment in himself during his stay provides

an ongoing means for gauging the development of his ego strength and for testing out his new modus operandi.

stage 4

Although professional intervention takes place throughout the entire program, its most important contribution is made during the fourth stage of treatment. (Because the goal of the therapeutic community is structured to facilitate the learning of a new life style, a total of two years in the therapeutic community is not uncommon.) During the fourth and final phase, the resident tests his independence in the community at large. Progress through the preceding three stages prepares the resident to handle the responsibility of engaging in a one-to-one therapeutic endeavor. Whereas the neophyte resident is likely to abuse individual therapy because of his parasitic approach to any interpersonal relationship, the individual at stage four has attained the level of maturity necessary for this sort of involvement. His drive to be self-sufficient, his need to grow through social interaction, and his ability to use reason and common sense instead of relying, as he once did, on immediate impulse gratification enable him—with professional help—to take his responsible place in society.



"His drive to be self-sufficient, his need to grow, and his ability to use common sense enable him to take his responsible place in society"

by H. Beatty Cotnam

Condensed and adapted for Addictions
by Lois Adair

DRUG DEATHS IN ONTARIO

THE SUPERVISING CORONER'S ANALYSIS OF THEIR CAUSES IN 1970

Much has been said by many on the subject of drug deaths. For example, I have read items in the press that would give one the impression that deaths from heroin and speed are common in Ontario. The possibility that such misapprehensions are widespread underlines the importance of dispelling them with the aid of some official figures. If, in the process,

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Dr. Cotnam has been Supervising Coroner for the Province of Ontario for ten years. This article is based on a paper he presented in November, 1971, at the Continuing Education Course for Coroners held in Toronto. Mrs. Adair was formerly an editor of *Addictions* and is now a free-lance writer and editor specializing in topics related to the social sciences and medicine.

I can help direct attention to causes of drug deaths that far outstrip these exotic substances, a second . . . and perhaps more important . . . purpose will have been served.

In this Province there were, in 1970, 57,489 deaths, 45% of which (about 26,000) were investigated by its 371 coroners. Of these, only 563 deaths involved use of one or more chemicals. These 563 fall into four groups: (1) cases in which *alcohol* was the primary agent or a major factor; (2) cases in which *alcohol combined with one or more other drugs* was such an agent or factor; (3) cases in which *barbiturates, alone or combined with other drugs* other than alcohol, were at fault; and (4) cases which could be laid at the door of *drugs or chemicals other than alcohol or barbiturates.*

1. Alcohol As a Major Factor in Deaths

There is no doubt that alcohol tops the list as a killer, direct and indirect. This is a fact too easily lost sight of with so much attention fastened on less familiar chemicals such as heroin, speed, and the hallucinogens. Of the 563 cases we are considering here, 300 are instances in which alcohol was a major factor. Even this, however, does not reveal the actual number of deaths resulting from its use. The true figure is probably much, much higher. A great many deaths due to chronic or even acute alcoholism are not sufficiently spectacular, unusual, or mysterious to be reportable under the Coroners' Act. Reportable cases do not include the many who die at home or in hospital from the great variety of medical conditions and complications of chronic and/or acute alcoholism. These include such conditions as cirrhosis of the liver, peptic ulcer, gastro-intestinal hemorrhage, and many neurological and cardio-vascular diseases. Then, too, there are many people who die of some injury received while under the influence of alcohol and whose deaths are recorded as being due to these injuries, with no special mention of alcohol. Every physician is familiar with such cases, but the vast majority of death certificates covering them would not even list alcoholism as a *possible* contributing factor.

Looking at the 300 cases we do know about, I have divided them into 12 different categories and separated these into male and female subsections (Table I). You will notice that males far exceed females in all subsections except careless smoking: four times as many male alcohol deaths are reported as female.

Our investigations also show that many deaths occur indirectly because of

CATEGORY	SEX OF VICTIM male	female
Cardio-vascular	38	2
Gastro-intestinal	30	13
Fatal motor vehicle accidents	26	4
Chest conditions	23	1
Asphyxia due to aspiration of vomitus	23	5
Suicides Hanging: 17 males, 1 female Gunshot: 5 males, 1 female Jumping: 1 male	23	2
Acute alcoholic intoxication	22	7
Falls	18	11
Drowning	9	1
Exposure	7	2
Careless smoking	5	6
Other*	15	7
TOTALS	239	61

*"Other" is a catch-all for such things as epilepsy, electrocution, and injuries received as a result of lying down on the road or train tracks and being run over by one or more cars or a train.

TABLE ONE

NAME OF DRUG OR CHEMICAL INVOLVED IN DEATH	SEX OF VICTIM	
	Male	Female
Non-barbiturate hypnotics and tranquillizers	13	14
Salicylates	2	11
Speed compounds	6	—
Cyanide compounds	4	—
Strychnine	—	2
Methyl hydrate	1	—
Insulin (overdose)	1	—
Drano	1	—
Narcotic analgesics		
Heroin	3	1
Demerol	—	1
Methadone	—	2
Darvon	—	2
Paraldehyde	1	—
Marihuana and hashish	1	—
MDA	—	1
Glue	1	—
LSD (indirect)	1	—
Unknown (not identified)	3	3
TOTALS	38	37

TABLE TWO

alcohol. For example, children die in fires caused by the careless smoking of a drunken adult, and impaired drivers kill many other people.

2. Alcohol plus One or More Other Drugs

Of the 113 deaths in this second category (63 males, 50 females), 79 were due to the use of alcohol and barbiturates, 7 to alcohol and tranquillizers, 4 to alcohol and salicylates, 16 to alcohol and one other drug not named above, and 7 to alcohol and a mixture of two or more other drugs. Some of the other drugs found in combination with alcohol were methyl alcohol, isopropyl alcohol, methadone, Demerol, nicotine, cyanide, MDA, codeine, morphine, and heroin. Of this 113, 66 (58%) were suicides (as compared with only 8% where alcohol alone was involved), and within this suicidal sub-group there were approximately equal numbers of males and females. By far the commonest drug for suicides to combine with alcohol was a barbiturate (47 out of 66 cases).

3. Barbiturates Alone or Combined with Other Drugs (except Alcohol)

There were 75 of these cases, in the majority of which death was caused by barbiturates alone. Other drugs involved in some cases included salicylates and tranquillizers. Women outnumbered men nearly two-and-a-half to one, and 68 of the 75 deaths were suicides. Most of the victims were between 30 and 50 years of age, with the remainder being spread up and down from there in decreasing numbers. There was only one case under 20 years of age; there were four cases over 70.

4. All Other Drugs or Chemicals

In this final group there were also 75 cases. This time they were split almost evenly, with 38 male and 37 female deaths. Table II shows what was found in the various cases. Again, suicides (about 75%) predominate, most of these being caused by tranquillizers, non-barbiturate sleeping pills, or salicylates.

The causes of death in this group included asphyxia due to overdose, shooting, hanging, jumping (with one jump being accidental). The glue-sniffing death was due to asphyxia from a plastic bag pulled over the head. The indirect LSD death referred to was a premature infant of 34 weeks' gestation whose mother had frequent LSD trips during pregnancy and was on a trip when admitted to hospital in labor. LSD was considered to be a major factor in causing this stillbirth.

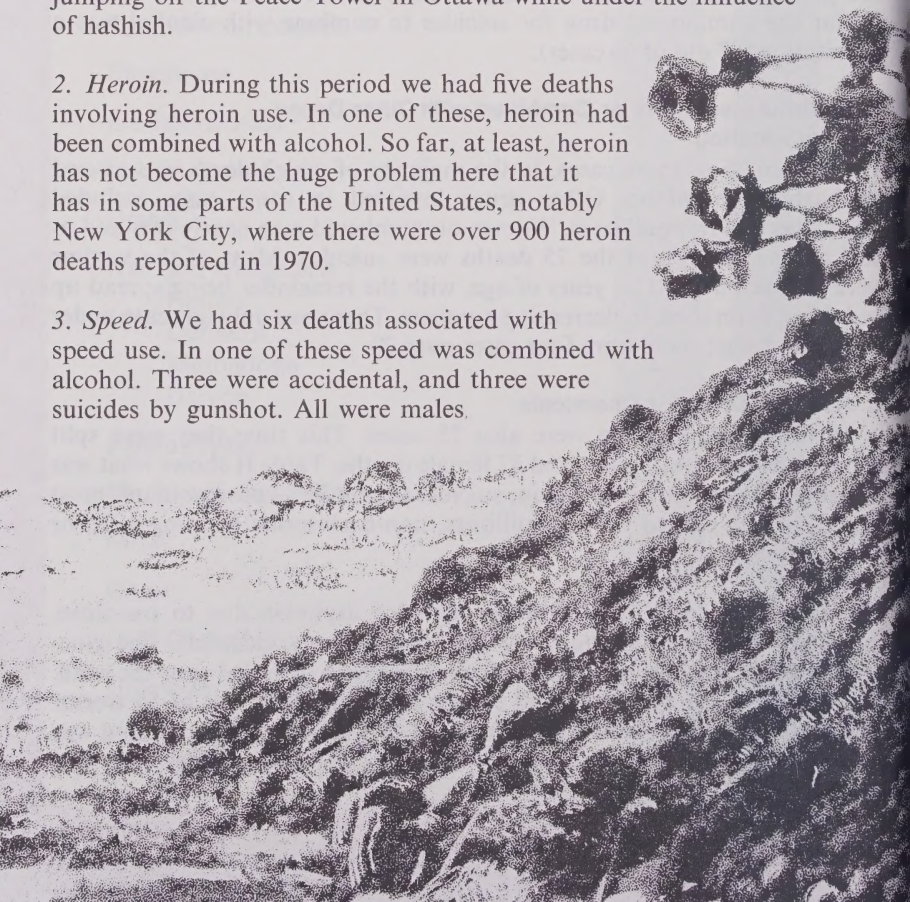
How Deadly Are the Publicized Drugs?

One must be careful not to infer too much concerning the nature of a drug or its effects, either on individuals or on society, merely from the number of deaths caused by that substance. Death is a very important factor to consider, of course, but it is only one of many. In deciding whether a drug is, on the whole, good or bad for people and in placing a drug in its proper perspective, it is helpful however, to know the number of deaths associated with it in one's own locality. I think it may be useful to present some Ontario figures for examination from this point of view.

1. Marihuana and Hashish. We have just one case in our files for 1970. This was a young man who committed suicide by jumping off the Peace Tower in Ottawa while under the influence of hashish.

2. Heroin. During this period we had five deaths involving heroin use. In one of these, heroin had been combined with alcohol. So far, at least, heroin has not become the huge problem here that it has in some parts of the United States, notably New York City, where there were over 900 heroin deaths reported in 1970.

3. Speed. We had six deaths associated with speed use. In one of these speed was combined with alcohol. Three were accidental, and three were suicides by gunshot. All were males.

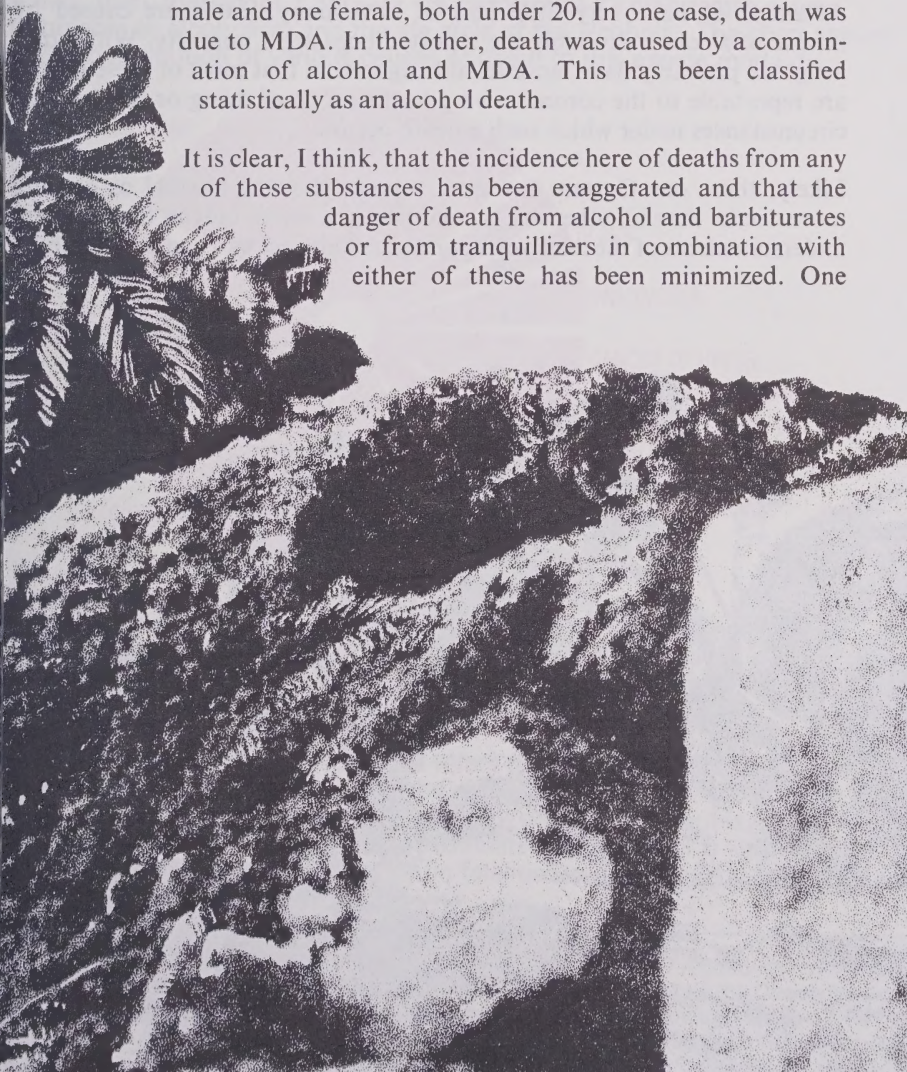


4. *Glue-sniffing*. This caused only one death in 1970, which represents a marked decrease from some previous years.

5. *LSD*. This is considered to have caused only one death . . . the one indirect one of the unborn child that I have already referred to.

6. *MDA*. We had two deaths associated with this "love drug": one male and one female, both under 20. In one case, death was due to MDA. In the other, death was caused by a combination of alcohol and MDA. This has been classified statistically as an alcohol death.

It is clear, I think, that the incidence here of deaths from any of these substances has been exaggerated and that the danger of death from alcohol and barbiturates or from tranquillizers in combination with either of these has been minimized. One



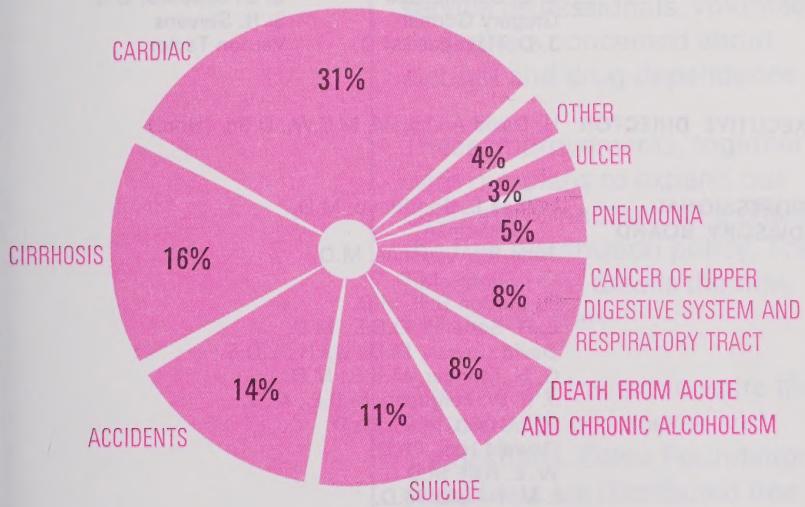
must not, of course, forget that heroin is an extremely dependence-producing and dangerous drug or that speed is undeniably destructive, especially on the psychological level. Nevertheless, it is a fact that, in Ontario, alcohol kills many more people each year than all of these more "exotic" drugs put together. Barbiturates also have a fairly impressive record in this respect.

Actually, we have very little idea of how many deaths are caused by misuse of alcohol. Probably the reported ones are a minority. With other drugs we probably have more reliable figures, in that most of these deaths are reportable to the coroner owing to the mode of dying or the unusual circumstances under which such a death occurs.

Likely, then, our Ontario coroners' reports showing alcohol as causing more deaths than all other drugs combined are unreal only in that they are understatements of the relative importance of alcohol as a cause of death. □

A NOTE ON EXCESS MORTALITY ATTRIBUTABLE TO ALCOHOLISM*

Health costs associated with alcoholism are indeed impressive. In 1969, 22,660 people between 20 and 70 years of age died in Ontario. Of these, about 11% (2,430) were alcoholics. If death rates of Ontario alcoholics were the same as in the general population only about 1,070 would have died. It follows, then, that about 1,360—or 6% of the total 22,660 deaths—were attributable to alcoholism and the life style of the alcoholic. The chart shows relative contribution of various causes of death to this excess mortality.



Undoubtedly, the most important factor in causing the high death rates among alcoholics is chronic, excessive use of alcohol. However, other contributing factors are neglect of proper nutrition and hygiene, a tendency to smoke heavily, and emotional states which are often marked by depression.

The excess mortality described above refers only to alcoholism and behaviors and conditions typical of the alcoholic life style. It should be noted, however, that alcohol use at lower levels also contributes heavily to mortality. For example, it has been estimated that alcohol is involved in about 50% of all motor vehicle traffic fatalities.

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*This information is based on a mortality study—"Causes of Death of Alcoholics" by Wolfgang Schmidt and Jan de Lint—to be published in Vol. 33, No. 2 of the *Quarterly Journal of Studies on Alcohol*. Dr. Schmidt is Associate Research Director (Social Studies) at the Addiction Research Foundation and Mr. de Lint is a Research Scientist there.

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This issue of *Addictions,* with its new format, color and graphics, reflects our continued effort to provide a useful and vital publication. Increasing emphasis will be placed on current and comprehensive articles relevant to the needs of health and social service professionals, volunteers, and others concerned about alcohol and drug dependence.

These improvements, together with our plans to expand our circulation, necessitate a change in the free distribution policy. The attached card details the new subscriber plan.

Readers are invited to write the editors with comments and suggestions. Other Foundation pamphlets are distributed free to residents of Ontario.

Writers are invited to submit manuscripts for publication. Articles should be accompanied by the author's résumé.

An Agency of the Province of Ontario

addictions

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ADDICTION RESEARCH FOUNDATION OF ONTARIO

summer 1972

addictions

Addictions is published four times a year by the Addiction Research Foundation of Ontario, 33 Russell Street, Toronto 4. The contents of each issue are selected on the basis of their potential interest to people engaged in research, treatment, or education in the field of alcoholism and drug dependence. *Articles published in* Addictions *reflect the views of their authors, not necessarily those of the editors or of the Addiction Research Foundation.*

EDITOR: Lawrence Purdy

MANAGING EDITOR: Sherrill Game

ART DIRECTOR: Donald Murray

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The variety of information sources in the field of alcohol and drug education has attracted the attention of researchers and commentators alike. Skilled social scientists have undertaken to identify those sources deemed most reliable, informative, and influential. Some, like Dr. Reginald Smart of this Foundation, have concluded that young people rate the news media above family, friends, church, and school—and far above their own experiences—as influential sources of information. However, before our friends in press, radio, and television rejoice in this scientific endorsation, let us examine more closely the original sources of information consulted by the top-rated media.

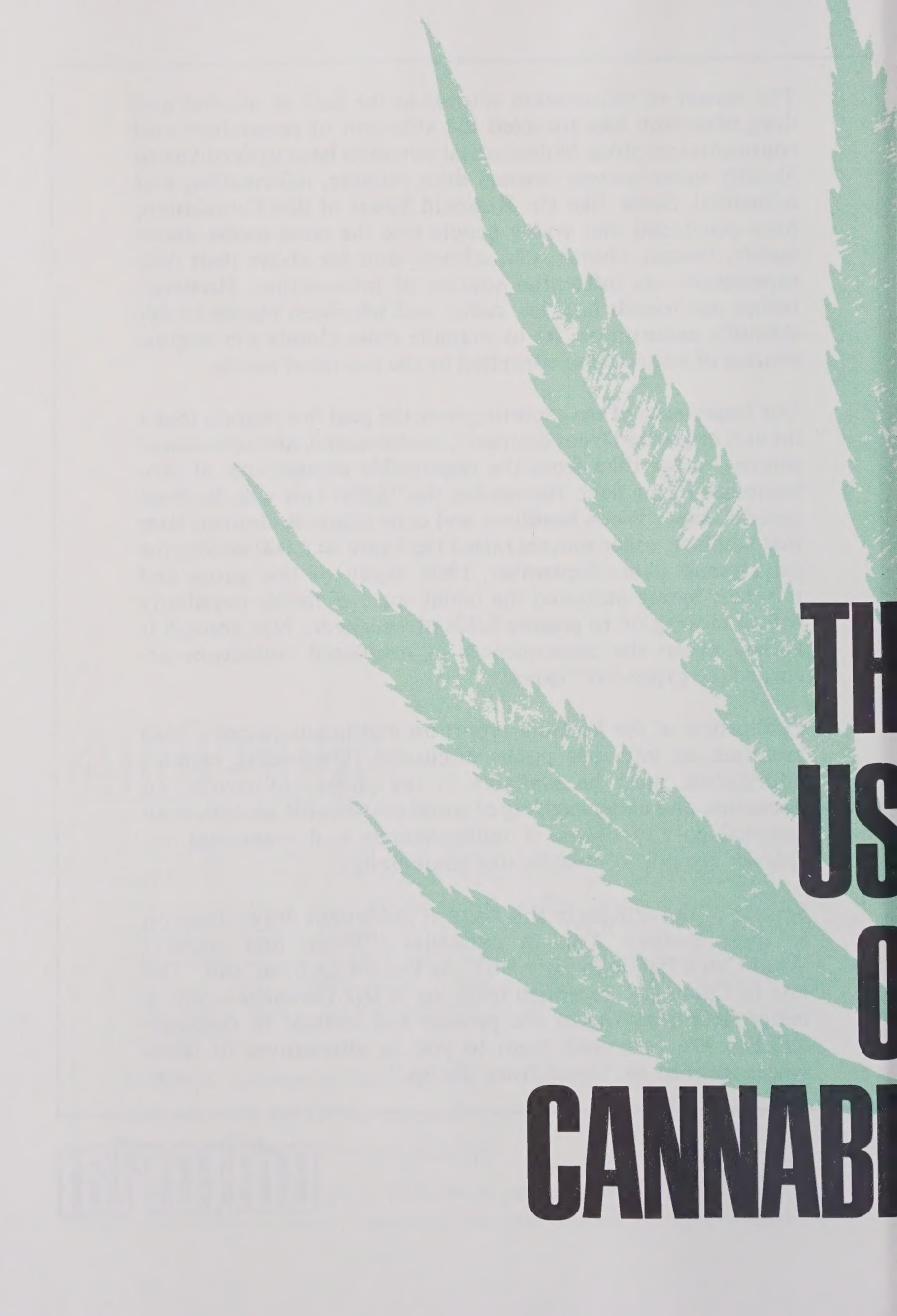
Our impression of the reporting over the past few years is that a lot of it originated from dramatic, controversial, and sensational sources rather than from the responsible perspectives of professionals in the field. Remember the "6,000 kids will die from speed!" days? When headlines and copy space diminished later that summer, other sources raised the figure to 8,000 adding the cataclysmic date—September, 1969. Many of the gurus and prophets barely outlasted the initial spate of media popularity before moving on to greener fields of endeavor. Not enough is known about the consequences of misplaced confidence accorded the gypsy-like "experts."

Publication of the Le Dain report on marihuana places a high premium on informed public discussion. Up-to-date, reliable information must be available to the public. Moreover, an awareness and understanding of social cost-benefit analysis is an essential part of debate if indiscriminate and emotional responses are not to polarize our communities.

Several of the articles in this issue of *Addictions* draw attention to these matters. Two in particular—"Drugs and Society: What Can a Public Inquiry Do?" by Gerald Le Dain, and "The Use of Cannabis" reprinted from the *WHO Chronicle*—offer a better understanding of the process and content of decision-making. We commend them to you as alternatives to those voices inclined to "shoot from the lip."

L.A.P.

editorial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A spirited debate is taking place about the effects of cannabis on man. A group of experts convened by WHO[1] has recently made an authoritative examination of the subject from the scientific viewpoint, assessing present knowledge of the effects of cannabis on man and indicating where further research is needed. The report[2] of the Scientific Group, on which the following article is based, is supported by almost 200 references to studies carried out in many parts of the world.

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[1]Members: Dr. T. Asuni, Nigeria; Dr. J. Booij, Netherlands; Dr. H. Isbell, U.S.A. (*Chairman*); Mr. R. E. Popham, Canada (*Rapporteur*); Dr. N. H. Rathod, United Kingdom; Dr. J. Ribeiro do Valle, Brazil; Dr. M. I. Soueif, Egypt (*Vice-Chairman*); Dr. N. N. Wig, India. Secretariat: Dr. D. C. Cameron, WHO (*Secretary*); Dr. V. Fattorusso, WHO; Dr. W. H. McGlothlin (*Consultant*).

[2]WHO Scientific Group on the Use of Cannabis (1971) *Report*, Geneva, 47 pages (*Wld. Hlth. Org. Techn. Rep. Ser.*, No. 478). Price: 30 p., $1.00, or Sw. fr. 3.—.

Cannabis sativa L. is an annual plant that grows wild in most temperate to tropical areas. It has a long history of cultivation, as a source both of fibre (hemp) and of psychoactive substances. The plant produces a resinous substance that contains the major part of the psychoactive and intoxicating ingredients. This substance occurs primarily in the flowering tops and upper leaves, hardly at all in the stalk and seeds. Psychoactive preparations of the cannabis plant intended for human consumption take many different forms, and are known by hundreds of different local or more general names. For the purposes of this article, preparations mostly containing leaves and flowering tops are referred to as *marihuana*, preparations containing flowering tops but no leaves as *ganja*, and preparations containing primarily resin as *hashish*.

Historical Trends

The intoxicating properties of certain cannabis preparations were probably known in India more than 2,000 years ago, and for centuries cannabis has been widely used by religious mendicants, mystics, and others. *Bhang*, which consists almost exclusively of the leaves, is still taken as a drink or as an ingredient of foodstuffs among all social classes in certain parts of India, particularly during festivals. In some areas, ganja is smoked fairly commonly by men in certain lower-class groups. Only recently has the smoking of cannabis preparations by students and other young people from a wide range of social classes become noticeable, and it is still apparently much less widespread than in some Western countries. Cannabis has been used in indigenous systems of medicine in India for many centuries because of its sedative, mildly analgesic, and other alleged properties.

The area between India and the Mediterranean appears to have become acquainted with cannabis preparations around the seventh century A.D. The preparations were both taken orally and smoked. In North Africa the smoking of marihuana (kif) and hashish is still quite widespread despite strong legal sanctions against it, but no upsurge in cannabis use has been observed among young people or middle-class groups.

Cannabis preparations were introduced into Europe, probably from North Africa, around 1860, but they aroused little interest among the general population at that time despite the publication of some colorful accounts of their effects by such writers as Baudelaire and Gautier. They began to

be widely used in western European countries in the 1960's. Young people of all socio-economic classes have tried them in recent years. In the United Kingdom, for example, one small sample survey of a school population indicated that 2.5% had taken the drug at least once, and larger surveys of university students showed that 4-10% had tried cannabis. On the other hand, there is no evidence of more than very occasional use in most eastern European countries.

Marihuana (maconha) has been used for its psychoactive properties for many years in some Latin American countries. Its use there has largely been associated with men of the lower socio-economic groups, but use among young people of other classes has recently been reported. For example, about 1% of college and university students in the state of Sao Paulo, Brazil, are estimated to have tried cannabis at least once. In the U.S.A., cannabis was rarely used for its psychoactive properties until about the end of the last century. Use was at first largely restricted to lower socio-economic minority groups, and it was not until the 1950's that cannabis began to be used among all classes of young people, a trend that has accelerated rapidly in the last few years and is now evident in Canada as well. The groups now taking cannabis in North America are composed largely of middle-class and upper-class young people of secondary school and college age. A recent sample survey of college students in certain parts of the U.S.A. indicated that one-third had at some time tried cannabis.

Cannabis and Other Drugs

Broadly speaking, there has been a tendency to use cannabis as the principal intoxicant in some regions (e.g., India, Pakistan, North Africa) and alcohol in others (e.g., North America, Europe). In many countries the current trend appears to be towards using both alcohol and cannabis. A large proportion of cannabis users also take psychoactive dependence-producing drugs of the amphetamine, barbiturate, hallucinogen, and morphine types, and this greatly complicates the task of attributing drug effects to a single substance.

The assertion is commonly made that the use of cannabis leads to the use of other drugs. Supporters of this "stepping-stone" theory hold that adolescents begin with marihuana and later proceed to other drugs, often including heroin, although most observers agree that cannabis has no

pharmacological action disposing users to resort to other drugs. In some countries most heroin users have taken cannabis preparations before trying heroin, but the great majority of cannabis users never proceed to the use of morphine-type drugs. However, it is well established that marihuana use is positively correlated with at least experimental use of other drugs. In some countries the probability of people taking strong hallucinogens such as LSD increases greatly with a rise in their use of marihuana. The longer cannabis is used, moreover, the greater is the probability that opium will be used as well.

These data are, of course, not sufficient to establish causal relationship between the use of one drug and another. It appears likely that important sociocultural and personal factors contribute to any progression from cannabis preparations to other drugs. For example, people who take marihuana often tend to limit their social life to the circle of drug-takers, especially in areas where drug-taking is not socially acceptable. Thus they have more opportunity than most people to try other drugs. It is also possible that certain individuals have a greater personal need than others to experience the effects of drugs, and that chronic intoxication with cannabis contributes to a poor orientation to reality, especially among adolescents.

Chemical Aspects

The chemical constituents of the cannabis plant include a unique group of chemicals called cannabinoids. The five most important cannabinoids, as far as the biological potency of cannabis is concerned, are: (—)-Δ^9-*trans*-tetrahydrocannabinol (Δ^9-THC), (—)-Δ^8-*trans*-tetrahydrocannabinol (Δ^8-THC), Δ^9-*trans*-tetrahydrocannabinolic acid (THC-acid), cannabinol (CBN), and cannabidiol (CBD).

The first two are psychoactive when taken orally or by smoking. THC-acid is not active when taken orally, but is partly converted to the active Δ^9 or Δ^8 when smoked. CBN and CBD have very little psychoactivity, but are present in fairly large amounts.

Δ^9-THC produces most of the effects of cannabis or extracts of cannabis in both animals and man. It is therefore believed, but not entirely proved, that this constituent accounts for most of the pharmacological activity of

cannabis. The Δ^9-THC content of cannabis preparations is influenced not only by the characteristics of the plant and the place and circumstances of its growth, but also by such factors as the age and methods of storage of the harvested materials. All active substances contained in preparations of cannabis deterioriate with time, the Δ^9-THC being converted to CBN. Consequently, the Δ^9-THC content of the different types of cannabis preparations varies widely. Nevertheless, it is possible to establish a rough scale of relative potency for the purpose of making broad comparisons of the preparations commonly used. Thus, marihuana (kif, bhang, etc.), ganja and hashish (charas) may be assumed to average respectively about 1%, 3%, and 5% by weight of Δ^9-THC.

Patterns of Use. The most common method of taking cannabis is by smoking, but it may also be ingested as a food or beverage. India is the only country in which a significant amount is taken orally, in the form of a beverage made from bhang. The stronger preparations, such as ganja and hashish, are normally smoked in a pipe, which is sometimes so constructed that the smoke is first passed through water. The crude forms, which are less potent, may be smoked in either pipes or cigarettes.

A meaningful evaluation of the consequences of cannabis use for the individual and society must take into account the manner, frequency, amount, and duration of use and the relative numbers of persons conforming to various usage patterns. Studies in the U.S.A. indicate that occasional users far outnumber those who use cannabis almost daily, whereas reports from India, Pakistan, and North Africa are frequently concerned only with regular users. In India, use of 1-2 g of ganja per day (about 30-60 mg of Δ^9-THC) is considered moderate. In a number of studies in India and North Africa, average daily doses ranged from 13 to 66 mg Δ^9-THC, while maximum daily doses varied from 200 to 700 mg. These figures for areas where cannabis has traditionally been the principal intoxicant contrast sharply with the one or two marihuana cigarettes (5-10 mg of Δ^9-THC) typically used by young people in North America and some other areas.

The duration of cannabis use is important. Many authors imply that once the use of cannabis is well established it is likely to continue on a daily basis for many years and is not infrequently a lifelong practice. However, there is some indication that, in India and North Africa, the

period of time over which cannabis is used by individuals may have been exaggerated.

Why People Use Cannabis

There is a remarkable variety of reasons for using cannabis. Association with other users, curiosity as to the effects, and a desire for relief from tension or for a pleasurable feeling are widely cited as reasons for *starting* to use the drug. Many people say they started using cannabis in an attempt to substitute it for alcohol, opium, cocaine, or other drugs. In India especially, religious and traditional medical practices play a role in initiation.

One of the more frequently stated reasons for *continuing* to use cannabis moderately is the sense of well-being and relief from tension experienced. It is used less frequently in an attempt to enhance sexual satisfaction, and to increase the enjoyment of music and food. It is also reportedly taken to alleviate hunger, or to give relief from boredom, frustration, and depression. In Europe and North America, users sometimes cite enhanced performance in creative efforts as a reason for using cannabis. In India, cannabis has long been used by priests and other religious figures as an aid to meditation and to the attainment of mystical states. Wandering religious mendicants sometimes remain in a state of chronic cannabis intoxication, which is interpreted by their followers as a religious trance. The religious use of cannabis has also been noted among certain groups in central and southern Africa, Brazil, Jamaica, and Mexico. There are a few references to the use of cannabis in Africa to provide courage for battles and sexual conquests, but on the whole this practice seems quite rare.

Social reasons are very important. Cannabis, more than any other intoxicant, is used throughout the world in small social settings, so that the desire to achieve a sense of belonging to an intimate group is undoubtedly a significant factor both in beginning and in continuing to use it. The social intimacy may be intensified by the precautions required to avoid legal sanctions.

Characteristics of Cannabis Users. Despite wide differences in sociocultural setting and extent of use, cannabis users tend to share certain characteristics. First of all, cannabis use is related to age, and is generally most popular among adolescents and young adults. Use is also closely related to sex: except in Europe and North America females hardly use

cannabis at all, and even in these areas the extent of use is low compared with that of men.

In areas of traditional cannabis use, the practice has tended to be confined to the lower socio-economic groups and is at present looked upon with disfavor in almost all countries of the world. Its generally illegal status contributes to this attitude, although disapproval has usually preceded rather than followed the imposition of legal controls.

Individuals who appear to enjoy the effects of cannabis tend to prefer an unstructured and spontaneous style of life, are relatively prone to take risks, value states of altered consciousness, and tend to seek such effects both through drugs and through other methods. Thus cannabis users are most frequently young, male, unmarried, and exhibit some instability with regard to residence, work, school, and goals. Individuals who have no taste for the cannabis experience *per se*, are most apt to show a preference for a controlled, structured, rational, and secure approach to life.

Excessive use of cannabis is associated with personality inadequacies. Persons who exhibit emotional immaturity, low frustration tolerance, and a failure to assume responsibility tend to be over-represented in samples of heavy cannabis users.

Sociocultural Factors. Friendship, peer group approval and pressures, and local customs are often associated with the moderate use of cannabis. Another factor associated with regular and particularly with heavy use is rapid sociocultural change, as is found in situations involving industrialization, urbanization, social conflict, and transition between war and peace. In such circumstances, the individual's system of values may be changing, and the usual cultural restraints placed upon his overt behavior may be removed as a result of separation from family and friends and affiliation with new peer groups. In countries with a long history of cannabis use, extremely poor rural workers are often able to fit moderate use of cannabis into their routine of living, with little tendency to increase the frequency or amount; when they migrate to city slums, however, their use of the drug often increases and becomes undisciplined.

To sum up, the epidemiology of cannabis use involves three factors: (a) the personal characteristics of the actual or potential user, (b) the socio-

cultural pressures on him, and (c) the pharmacological properties of various cannabis preparations. The extent to which use of the drug satisfies conscious or subconscious needs will help to determine whether or not the behavior is sustained.

Effects on Man

Cannabis preparations and Δ^9-THC are about three times as potent when smoked as when ingested. To obtain the maximum effect from these materials, the smoker must use a technique that is somewhat different from that of smoking tobacco cigarettes and must be learned by practice. When this technique is used, it is believed that roughly 50% of the Δ^9-THC content of a marihuana cigarette is absorbed by the lungs. The subjective effect begins very rapidly, and an experienced smoker can perceive subjective effects within a minute. The peak effects are probably reached within 20-30 minutes after smoking. The duration varies with the dose, but the effects of a single administration are usually dissipated three or four hours after smoking or about eight hours after oral ingestion.

Immediate Effects. The symptoms experienced after taking cannabis preparations depend primarily on the dose, although they are also influenced by the setting and by the expectations and personality of the user. In experiments with one sample of Δ^9-THC, threshold doses of 50 μg/kg by smoking, or 120 μg/kg orally, resulted chiefly in mild euphoria. With doses of 100 μg/kg by smoking, or 240 μg/kg orally, some perceptual and sensory changes also occurred. Doses of 200 μg/kg by smoking, or 300-480 μg/kg orally, resulted in marked distortion of sensory perception, depersonalization, and both optical and auditory hallucinations. The quantifiable physiological changes are few. They consist of injection of the conjunctivae, a decrease in muscular strength as measured with a finger ergograph, and an increase in pulse rate. Various doses of cannabis preparations produce some impairment of body and hand steadiness, which persists as long as the effects of the drug. However, gross ataxia does not generally result, even at "high" doses. Speed of tapping and simple reaction time are only slightly impaired, but a 20% decrease in complex reaction time has been measured for an oral dose estimated at 75 mg of Δ^9-THC. One preliminary study has shown the smoking of two marihuana cigarettes to have little effect on the complex task of operating a driving simulator, although the subjects reported achieving a "social high." However, there is some uncertainty about the potency of the preparation used in this

study. In general, the degree of impairment of psychomotor performance is larger for inexperienced subjects, for large doses, and for complex tasks.

Among the more frequently reported effects of cannabis are sensory and perceptual distortion, particularly of the sense of time. Usually, time is perceived as being longer than clock time. Cannabis users often report increased auditory sensitivity and enhanced appreciation of music. Tests have shown pitch discrimination and other measures of musical aptitude to be unchanged or impaired following the administration of cannabis to non-musicians, although some studies have suggested an improvement in auditory acuity. Some people have reported a subjective impression of enhanced touch, taste, and smell while using cannabis. However, measurements of threshold for touch, vibration, two-point discrimination, olfactory acuity, and visual brightness have shown no change.

Of course, these discrepancies between subjective feelings and objective measurements do not disprove the existence of the former, or their reality for the person experiencing the sensation. At the subjective level, cannabis often enhances touch and other senses, prolongs the perception of time, and sometimes imparts novelty to familiar objects and activities. All these factors may increase the sense of gratification experienced, whether or not enhancement of sensation or of performance can be verified by objective measurements.

Consistent reports of interference by cannabis with short-term and immediate memory functions have focused experimental investigation on this and other cognitive areas. The ability to recall objects and reproduce designs after brief exposure has been found to be slightly to moderately impaired. The performance of more complex arithmetical tasks showed much greater impairment and is clearly dose-dependent.

Oral doses of cannabis estimated at 20 mg of Δ^9-THC given to inexperienced subjects severely impeded a learning task that required the subject to discover and remember several associations by trial and error. It also significantly impaired reading comprehension. In experienced users the smoking of cannabis (estimated at 18 mg of Δ^9-THC) caused a pronounced decrease in the coherence, clarity, and time orientation of speech and an increase in free association and dream-like imagery. The

impairment in performance of these more complex tasks appears to arise from difficulty in maintaining a logical train of thought.

In conclusion, cannabis significantly impairs cognitive functions, the impairment increasing with the size of the dose, the complexity of the task, or both.

Acute Psychotoxic Reactions. At high dose levels a state of acute intoxication is usually seen, the major manifestations of which often include paranoid ideas, illusions, hallucinations, depersonalization, delusions, confusion, restlessness, and excitement. The syndrome may resemble an acute psychotic episode. In occasional instances, there may be additional features of a toxic psychosis, such as delirium, disorientation, and marked clouding of consciousness. In most cases these acute effects are temporary and disappear within a few hours, although in some instances they may persist for 1-3 days and occasionally up to 7 days. Syndromes resembling acute intoxication have been reported following relatively small doses of cannabis, e.g., after smoking one cigarette, especially among inexperienced users.

Another type of acute psychotoxic reaction to cannabis is seen in some persons, who appear to be overwhelmed by anxiety, fear, and panic. There is usually very little or no evidence of disorientation, delusions, illusions, or hallucinations. The syndrome may last for a few hours to a few days and may occur not only after large doses but also after relatively small ones (e.g., the equivalent of one or two marihuana cigarettes).

Delayed Phenomena. In addition to these immediate effects of cannabis, other phenomena have been described as being associated with repeated or long-term cannabis use and occur between, as well as during, periods of intoxication. In general, however, the degree and nature of any relationships that may exist between these "delayed phenomena" and the prolonged or intensive use of cannabis have not been established.

Many predominantly physical effects have been attributed to the use of cannabis, but few can consistently be related to it. There is general agreement that persistent physical effects of a significant nature are uncommon following even prolonged use of bhang, if ingested in moderate quantities. It is questionable whether weight loss, emaciation, anaemia, constipation, and other symptoms reported to be associated with cannabis

smoking in India are due to the drug or to poverty, poor nutritional status, and intercurrent infections. Studies in the West have, by and large, failed to show any significant physical deterioration after an average of 7-8 years of marihuana use.

Reports from India have stressed the occurrence of eye changes following long-term use of charas and ganja. The conjunctival injection seen during acute intoxication persists even when the drug is not being used. Preliminary reports of *in vitro* studies do not indicate any cannabis-related increases in chromosomal abnormalities in rats or man. No teratogenic effects of cannabis have been observed in man, although they have been found in rats, hamsters, and rabbits when high doses of cannabis extracts were administered.

Various psychiatric conditions purportedly related to or associated with the use of cannabis have been described, covering a wide range of disorders and situations. There is a group of psychotic reactions, generally associated with "heavy" cannabis use, that last from one to six weeks and present quite varied symptoms, often including schizophrenic, manic, or acute organic features. However, there is only limited, presumptive evidence for the existence of a specific cannabis psychosis of this type, although the evidence is sufficient to warrant the initiation of carefully controlled investigations.

The literature often mentions a characteristic personality deterioration among older habitual users after prolonged "excessive" use. Such individuals show a simple-minded, carefree state and are sometimes described as "kif-happy." However, no systematic scientific study has been made to assess their previous personalities, the social factors involved, and the occurrence of such a syndrome among non-users of cannabis.

There is evidence that, under certain conditions, the regular use of cannabis for several years is associated with measurable deficits in a number of psychomotor and cognitive functions. In a study of 850 hashish users and 839 non-users drawn from a population of prisoners in Egypt, differences between users and controls were detected in a number of standardized objective tests to assess speed and accuracy of psychomotor performance, initial reaction time, memory for digits, and memory for designs. It must be stressed that the association between cannabis use and the reported deficits does not necessarily indicate a causal relation-

ship. The differences might pre-exist or be related, for example, to changes in life style occasioned by regular participation in socially unacceptable and unlawful activities.

A number of authors claim a fairly consistent association between "heavy" use of cannabis and what is sometimes called the "amotivational syndrome." This has been especially emphasized in connection with young people in Western countries. Among the main characteristics usually cited are apathy, emphasis on the present rather than the future, preference for fantasy rather than rationality, child-like thinking, and preference for a loosely structured type of life. It has been suggested that the clinical picture resembles that of patients with an organic brain syndrome. However, the evidence might equally suggest an acquired pattern of behavior in which cannabis acts as a catalyst. Among impressionable adolescents, cannabis-induced suggestibility may facilitate the rapid adoption of new values and behavior patterns, especially when the drug is taken in a socially-alienated subculture that strongly advocates such changes.

It is possible that some long-term behavioral effects attributed to cannabis use are due largely or in part to the sociocultural context in which the drug is taken. For example, in a society where cannabis use is illegal and generally disapproved of, the user is *ipso facto* engaged in non-conforming behavior. This in itself may close various avenues of social adjustment to him, and lead to the adoption of a different style of life involving a number of characteristic behavior patterns developed independently of drug use. Some of these patterns may be viewed as deviant by a majority of the society, but one would not be justified in attributing them to the pharmacological action of the drug.

Cannabis and Crime. It is sometimes claimed that loss of control during cannabis intoxication may result in violence or other forms of impulsive behavior. The evidence in support of this argument is largely anecdotal, although it appears that violent and impulsive behavior is not infrequent among persons with relatively acute psychotic reactions to cannabis. At the same time it must be remembered that such acute reactions are not common; since disruptive behavior is likely to draw attention to them, individuals exhibiting such behavior are likely to be over-represented in hospital samples.

Several investigators have sought to establish the overall prevalence of detected crime among users. Their studies show a correlation of cannabis use with crime, but do not establish causal relationships. They show an association between cannabis use and minor asocial or antisocial behavior, but not between cannabis use and major crime. Those studies that begin with a sample of persons arrested for using cannabis generally show a much higher correlation with subsequent delinquent behavior than do studies that begin with a more representative sample of cannabis users. Even among persons who have never used cannabis, for that matter, a positive correlation exists between arrest and subsequent delinquent behavior.

Some military studies have shown that marihuana users exhibit poor adjustment to military life, but little aggressive criminality. Two studies of Brazilian prisoners similarly concluded that cannabis played a minimal role in crimes of violence. In the U.S.A., a recent study of juvenile drug users, mostly from lower-class minority groups, found that marihuana users were less likely to show aggressive behavior than were the group who preferred alcohol. Moreover, they found that a shift from alcohol to marihuana was likely to be accompanied by a tendency towards less delinquent behavior.

Tolerance and Dependence. Tolerance is "an adaptive state characterized by diminished response to the same quantity of a drug."[3] Some evidence of tolerance in "heavy" cannabis users has been reported. In an experimental study in which subjects smoked marihuana *ad libitum* for 39 days, the number of cigarettes taken daily slowly increased throughout the period, while the characteristic euphoric reaction and the increase in pulse rate disappeared after the first few days. Some ganja and charas smokers in India consume daily amounts estimated to contain an average of 720 mg of Δ^9-THC. It seems doubtful whether such large doses could be consumed unless some degree of tolerance had developed.

Physical dependence has been described as "an adaptive state that manifests itself by intense physical disturbances when the administration of the

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[3]Eddy, N., Halbach, H., Isbell, H., and Seevers, M. (1965) Drug dependence: its significance and characteristics, *Bull. Wld. Hlth, Org.*, 32, 721-733.

drug is suspended."[3] There is no evidence that the withdrawal of cannabis, even from an extremely heavy user, produces an abstinence syndrome that begins to approach in severity those produced by drugs of the alcohol, barbiturate, and morphine types. However, reports have been made of some possible abstinence phenomena, including mild to moderate anxiety, depression, weakness, sleep disturbances, sweating, and fine tremors.

Psychic dependence has been described as a condition in which a drug produces "a feeling of satisfaction and a psychic drive that require periodic or continuous administration of the drug to produce pleasure or to avoid discomfort."[3] The Scientific Group was of the opinion that many regular (almost daily) users of cannabis exhibit psychic dependence, as do some less frequent but relatively "heavy" users, but the great majority of people who use it a few times on an experimental basis, or casually on a few festive occasions a year, could not be said to exhibit psychic or any other dependence on cannabis.

Research Needs

There is a substantial fund of knowledge about (a) the properties of the cannabis plant and the various psychoactive preparations derived from it, (b) the general manner in which those preparations are used in different parts of the world, (c) some of the individual and sociocultural factors associated with their use, and (d) the dose-related immediate effects on man of taking cannabis and Δ^9-THC. There are, nevertheless, a number of important questions to be answered with regard to these areas. It is evident also that there are at present many more questions than answers concerning the effects on man of prolonged cannabis use.

In the past few years, there has been a major expansion of research on the psychoactive constituents of cannabis, their pharmacological and toxicological effects, and their mode of action. The information obtained makes it increasingly important to intensify current research on (a) major epidemiological problems in widely varying sociocultural settings, and (b) the effects on man of using various cannabis preparations in differing amounts for specified, particularly prolonged, periods of time. These studies can be carried out only in relation to human subjects who are taking cannabis or who have taken it for some time, and laws and regulations governing the control of cannabis should make allowance for the legitimate needs

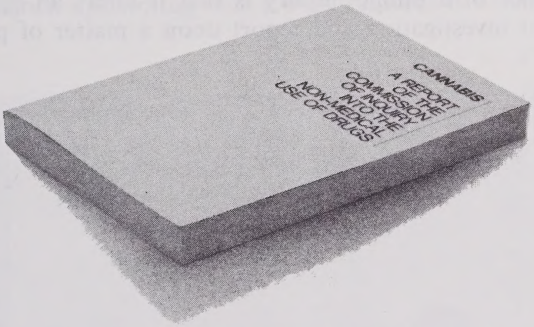
of such research. Where they do not already exist, provisions should be considered that would permit the possession of necessary research materials by accredited investigators and the conduct of epidemiological research (e.g., surveys of patterns of use) without legal hazard to either the investigator or the user.

It is also important to foster the development of research programs that are sufficiently similar in approach and methods to permit informative comparisons and cross-cultural analyses of studies carried out in different areas. In view of the great variability in the degree of psychoactivity produced by different cannabis plants and preparations, steps need to be taken to ensure that standard materials of known chemical content are available for experimental studies. Agreed chemical and biological criteria of potency and standard techniques for handling and analysing samples are also required.

DRUGS AND SOCIETY:

WHAT CAN A PUBLIC INQUIRY DO?

BY GERALD LE DAIN



During the time I have been involved in the work of the Commission of Inquiry into the Non-Medical Use of Drugs, I have had many occasions on which to ponder, from a variety of perspectives, the fundamental purposes and proper functions of a commission of this kind. What is a commission of inquiry's proper relation to the govern-

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Extracts from a speech delivered to The Empire Club of Canada in Toronto on March 16, 1972. Abridged and edited for *Addictions by Lois Adair*.

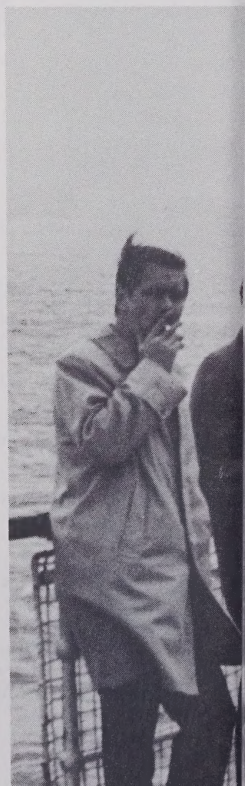
Gerald Le Dain, Q.C., is Dean of Osgoode Hall Law School, York University, and Chairman of the Commission of Inquiry into the Non-Medical Use of Drugs. Mrs. Adair is a former editor of *Addictions* who is now a free-lance writer and editor.

ment and to the public? Just how can such a commission be of value to the government and to the public? To what extent can the commission be useful in promoting public participation in the process of seeking solutions to complex social problems?

Commissions of inquiry vary so much that it is difficult to deal with such topics in a general way. Since my views inevitably have developed mainly out of my experience with our Commission, I shall illustrate what I have to say with references to its work.

Independence and Responsibility

The essence of a public inquiry is that it offers an opportunity for independent investigation and report upon a matter of public concern. A



Members of the Commission and reporters on a ferry to Prince Edward Island

PHOTOGRAPHS BY VIVIAN LUSCOMBE

commission appointed under Part I of the Federal Inquiries Act is an independent body on an equal footing with other institutions of government. The government, of course, can always put an end to it. But such a commission is independent in the sense that it is not subject to anyone's direction or supervision and need not be subject to political influence or pressure. Naturally, the degree to which this last is the case will depend very much upon the personalities of the members of the commission. I should say that the government has shown scrupulous respect for our independence.

Although it is independent in the ways I have mentioned, a commission of inquiry must nevertheless develop some sense of its ultimate responsibility. The order in council appointing such a body requires it to report to the

government or to a designated minister. Ultimately, however, I believe that a commission of inquiry is accountable to the public. Its function is to conduct a more detailed examination of a matter of public concern than is possible through the parliamentary process, and to inform the public of the results through its report to the government.

In instituting a public inquiry, a government may surrender some of its policy initiative, in particular, its initiative to identify the issues and to create public expectations and shape public opinion as to what is a reasonable legislative approach. It may also lose some of its control over timing. Why should it do this?

The reasons for establishing a public inquiry on an issue of legislative policy will vary but generally I believe it is for the purpose of developing public awareness and understanding of a complex problem and allowing time for the development and identification of public attitudes.

Functions of a Commission

I think it can be said that the function of any governmental commission of inquiry will be threefold: (1) to identify the issues, (2) to ascertain the facts, and (3) to come to conclusions as to what government policy on the matter in question ought to be.

In many ways, the most important task of the Commission of Inquiry into the Non-Medical Use of Drugs has been to try to identify the issues and place them in their proper relationship and perspective. For it is this which creates the essential framework for research, analysis, and debate. Although the Commission is certainly part of a political process, it is also part of a social process. It has certain things to say to government; but it also has an effect on perceptions, attitudes, and behavior. Its general way of looking at things is as important as its specific recommendations.

It is, after all, the general approach taken by a society toward a social problem which determines the way in which that society will respond to that problem. It is the general attitude toward the problem which is the strong undertow of social policy. There is much more than law and governmental action involved in the overall social response. The attitudes and responses of individuals in the various situations in which they encounter the problem can have a profound effect both on the nature of the problem—the direction in which it evolves and changes over a period of time—and on

the solutions which can ultimately be offered for it.

Action and Interaction

Whether it wants to be or not, an inquiry of this kind becomes a part of an ongoing social process in which the problem itself is embedded. There is action and interaction. As a commissioner, you realize that you are having an effect upon perceptions and attitudes—on the general way of looking at the problem—and on behavior. And indeed, you come to feel just as much concern, if not more, about the effect of your work on people's attitudes and behavior as you do about your specific recommendations to governments. A new way of looking at taxation may create a demand for, or expectation of, reform. Indeed, it may increase dissatisfaction with the existing system. But it is not going to change the way people pay their taxes under existing law. *A new view of a particular drug, however, may change behavior*, and so may a new view of the way in which individuals and institutions should respond in situations involving drugs.

It is thus that a Commission can have an influence which passes beyond the political into the social process. While the inquiry is in progress, the phenomenon being studied is changing very rapidly. And because it will not

Commissioners James Moore, Heinz Lehmann, Ian Campbell, and Chairman Le Dain in downtown Toronto

Commissioners Heinz Lehmann and Ian Campbell overlooking Regina

stand still, it is all the more difficult to measure. It is the need to keep monitoring a changing and hence elusive social phenomenon that makes the task of the Commission so complex.

Involving the Public

In many ways, a public inquiry can make its most useful contribution in identifying the issues and the essential nature of the decisions to be made, and in establishing the framework for analysis. This is a process in which the public can become involved, and this was what led us to conduct our public hearings. Providing a medium through which the public can contribute to identification and discussion of the issues is one way in which a public inquiry can respond significantly to the need for some extension of the regular electoral process on the social level.

It was to help us to identify the issues, to develop a feel for the range of attitudes that exist, and above all to develop a sense of social feasibility—of what the society was capable of doing about the problem—that we set out on our public hearings. We conducted 46 days of hearings in 27 cities. We visited 23 universities. And we are estimated to have travelled 50,000 miles.

Some people have wondered what we expected to receive from these hearings. We did not expect to ascertain the *weight* of opinion in Canada; but we did expect to hear, and we believe we heard, the *range* of opinion in Canada. We had the stimulation of direct contact with the kinds of people most deeply involved with the problem. Those hearings made a deep impression on us. They brought home to us, in a way that no amount of library study could do, the seriousness of the matters we were investigating. People poured out their deepest feelings.

We tried to maintain as much freedom as possible for discussion from the floor. There were many moving occasions. I particularly recall ones in which young people and adults on the floor were obviously exchanging their points of view for the first time, appealing to one another's understanding. Many times there was evidence of a tremendous effort to comprehend and to seek reconciliation. One of the things we discovered in those hearings is that we need public opportunities for the exchange of views on vital issues. The hearings provided a public occasion for people to say things to each other that they had obviously never said before.

Of course, not everyone was pleased with the results. Some objected very strongly to the way we did things, particularly to our practice of inviting people to speak from the floor after the formal submissions. In some cases we were held responsible for completely unplanned and unforeseen occurrences. Some institutions were subjected to strong criticism, and some skeletons rattled. I have a small file of some very choice letters complaining about these episodes and attributing them, no doubt with some reason, to the informal manner in which we conducted our hearings. (As you can imagine, the language in some of the letters is a good deal stronger than that.)

On the whole, however, I think the results were constructive. People in the communities we visited made their views better known to each other. We received a lot of valuable information and suggestions. And young people were heard and had an opportunity to examine leading citizens concerning their opinions. We discussed everything, down to the most fundamental values of life, because that is where this inquiry has taken us. We were talking about what it means to be a human being today. People talked freely about spiritual matters. The hearings also gave people a chance to see *what we thought the issues were*—what we thought it was important to learn.

The first round of hearings contributed to the perspective of our Interim Report, and we went out on a second round to obtain reaction to it. This concluded what may be called the first phase of the Commission's work. We look back on this phase now with some nostalgia. It was a time when we felt in close contact with the thinking and feelings of a great many people.

Facts and Fact Finding

The second function of a commission of inquiry—fact finding—is more difficult, particularly when the commission must deal with a complex social problem which calls for multi-disciplinary study. In many ways, however, it can be a commission's most important function.

Some might say that fact finding should be the *only* function of a commission of inquiry: that the issues should be identified by government, the conclusions left to the political process, and the inquiry asked simply to make findings of fact on particular issues. They might add that no special value should be attached to the opinions of five or more people chosen somewhat at random for reasons that are not always clear.

These arguments I cannot accept because I believe that the ability to identify the issues and place the problem in general perspective and the requirement to express conclusions are essential parts of the process of exposing to public view the nature of the decisions which have to be made. I think it is important to do this because the decisions ultimately have to be made by the public.

In the end, decisions in this field are very complex moral decisions, based on a number of imponderables and competing values, and in many cases they involve a choice of the lesser of evils. There are few easy choices, and the decisions are not of a kind that can be passed over to experts. We of the Commission trust that the work we have done will have thrown some illumination on the issues concerning which citizens themselves must ultimately decide.

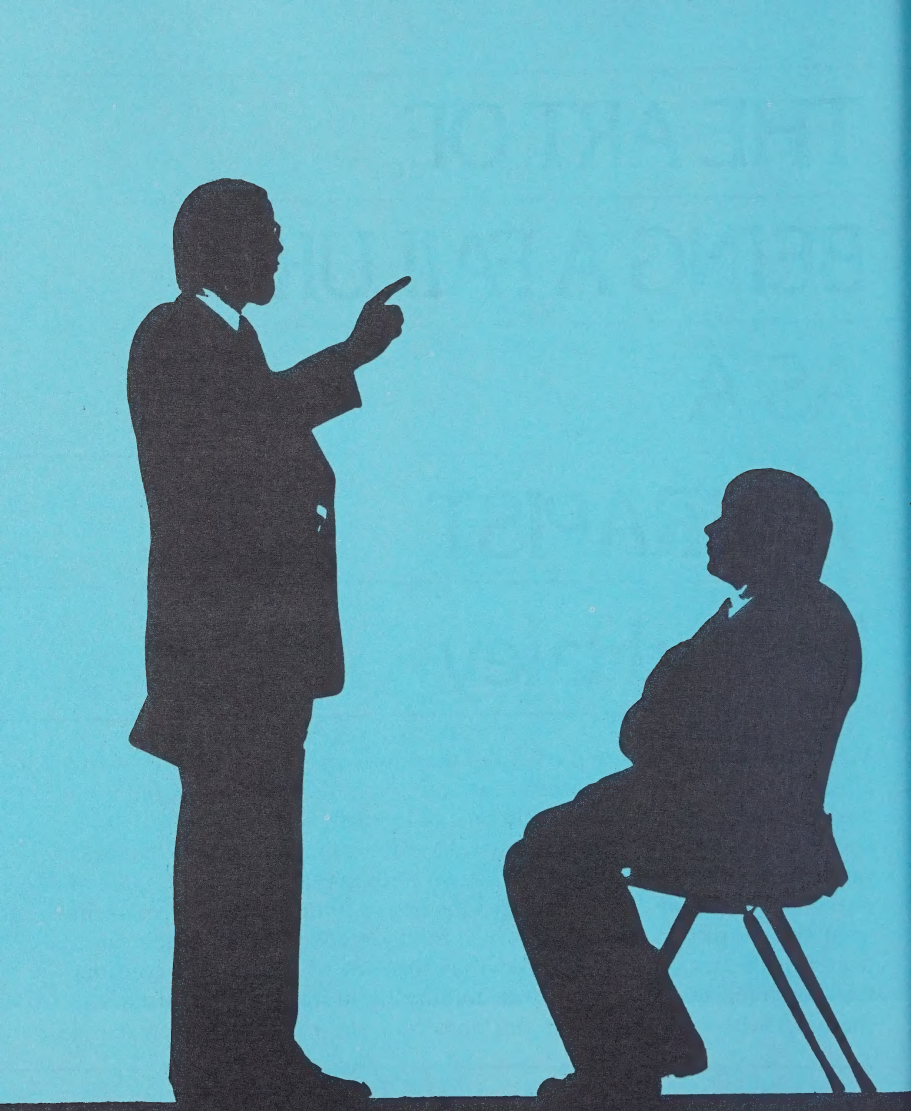
Members of the Commission arrive at Sherbrooke, Quebec

THE ART OF BEING A FAILURE AS A THERAPIST

by Jay Haley

What has been lacking in the field of therapy is a theory of failure. Many clinicians have merely assumed that any psychotherapist could fail if he wished. Recent studies of the outcome of therapy, however, indicate that spontaneous improvement of patients is far more extensive than was previously realized. There is a consistent finding that between 50-70% of patients on waiting-list control groups not only do not wish treatment after the waiting-list period but have really recovered from their emotional problems—despite the previous theories which did not consider this possible. Assuming that these findings hold up in further studies, a therapist who is incompetent and does no more than sit in silence and

Mr. Haley is Director of Family Research, Philadelphia Child Guidance Clinic, Philadelphia, Pennsylvania. This article first appeared in *The American Journal of Orthopsychiatry* 39 (July 1969): 691-695. It is also published in: Jay Haley, *The Power Tactics of Jesus Christ and Other Essays* (New York: Grossman, 1970). Copyright ©, the American Orthopsychiatric Association, Inc. Reproduced by permission.



"Insist that if a presenting problem is relieved, something worse will develop."

scratch himself will have at least a 50% success rate with his patients. How then can a therapist be a failure?

The problem is not a hopeless one. We might merely accept the fact that a therapist will succeed with half his patients and do what we can to provide a theory which will help him fail consistently with the other half.

However, we could also risk being more adventurous. Trends in the field suggest the problem can be approached in a deeper way by devising procedures for keeping those patients from improving who would ordinarily spontaneously do so. Obviously, merely doing nothing will not achieve this end. We must create a program with the proper ideological framework and provide systematic training over a period of years if we expect a therapist to fail consistently.

An outline will be offered here of a series of steps to increase the chance of failure of any therapist. This presentation is not meant to be comprehensive, but it includes the major factors which experience in the field has shown to be essential and which can be put into practice even by therapists who are not specially talented.

1. The central pathway to failure is based upon a nucleus of ideas which, if used in combination, make success as a failure almost inevitable.

> *Step A.* Insist that the problem which brings the patient into therapy is not important. Dismiss it as merely a "symptom" and shift the conversation elsewhere. In this way a therapist never learns to examine what is really distressing a patient.
>
> *Step B.* Refuse to directly treat the presenting problem. Offer some rationale, such as the idea that symptoms have "roots," to avoid treating the problem that patient is paying his money to recover from. In this way the odds increase that the patient will not recover, and future generations of therapists can remain ignorant of the specific skills needed to get people over their problems.
>
> *Step C.* Insist that if a presenting problem is relieved, something worse will develop. This myth makes it proper

not to know what to do about symptoms and will even encourage patients to co-operate by developing a fear of recovery.

Given these three steps, it seems obvious that any psychotherapist will be incapacitated, whatever his natural talent. He will not take seriously the problem the patient brings, he will not try to change that, and he will fear that successful relief of the problem is disastrous.

One might think that this nucleus of ideas alone would make any therapist a failure, but the wiser heads in the field have recognized that other steps are necessary.

2. It is particularly important to confuse diagnosis and therapy. A therapist can sound expert and be scientific without ever risking a success with treatment if he uses a diagnostic language which makes it impossible for him to think of therapeutic operations. For example, one can say that a patient is passive-aggressive, or that he has deep-seated dependency needs, or that he has a weak ego, or that he is impulse-ridden. No therapeutic interventions can be formulated with this kind of language. For more examples of how to phrase a diagnosis so that a therapist is incapacitated, the reader is referred to *The American Psychiatric Association Diagnostic Manual.*

3. Put the emphasis upon a single method of treatment no matter how diverse the problems which enter the office. Patients who won't behave properly according to the method should be defined as untreatable and abandoned. Once a single method has proven consistently ineffective, it should never be given up. Those people who attempt variations must be sharply condemned as improperly trained and ignorant of the true nature of the human personality and its disorders. If necessary, a person who attempts variations can be called a latent layman.

4. Have no theory, or an ambiguous and untestable one, of what a therapist should do to bring about therapeutic change. However, make it clear that it is untherapeutic to give a patient directives for changing—he might follow them and change. Just imply that change happens spontaneously when therapists and patients behave according to the proper forms. As part of the general confusion that is necessary, it is helpful to define therapy as a procedure for finding out what is wrong with a person and how he got

that way. With that emphasis, ideas about what to do to bring about change will not develop in an unpredictable manner. One should also insist that change be defined as a shift of something in the interior of a patient so that it remains outside the range of observation and is uninvestigable. With the focus upon the "underlying disorder" (which should be sharply distinguished from the "overlying disorder"), questions about the unsavory aspects of the relationship between therapist and patient need not arise, nor is it necessary to include unimportant people, such as the patient's intimates, in the question of change.

Should student therapists who are not yet properly trained insist upon some instruction about how to cause change, and if a frown about their unresolved problems does not quiet them, it might be necessary to offer some sort of ambiguous and general idea which is untestable. One can say, for example, that the therapeutic job is to bring the unconscious into consciousness. In this way the therapy task is defined as transforming a hypothetical entity into another hypothetical entity and so there is no possibility that precision in therapeutic technique might develop. Part of this approach requires helping the patient "see" things about himself, particularly in relation to past traumas, and this involves no risk of change. The fundamental rule is to emphasize "insight" and "affect expression" to student therapists as causes of change so they can feel something is happening in the session without hazarding success. If some of the advanced students insist on more high-class technical knowledge about therapy, a cloudy discussion of "working through the transference" is useful. This not only provides young therapists with an intellectual catharsis but it gives them a chance to make transference interpretations and so have something to do.

5. Insist that only years of therapy will really change a patient.

This step brings us to more specific things to do about those patients who might spontaneously recover without treatment. If they can be persuaded that they have not really recovered but have merely fled into health, it is possible to help them back to ill health by holding them in long-term treatment. (One can always claim that only long-term treatment can really cure a patient so that he will never ever have a problem the remainder of his life.) Fortunately the field of therapy has no theory of overdosage, and so a skillful therapist can keep a patient from improving for as long as 10 years without protest from his colleagues, no matter how jealous.

Those therapists who try for 20 years should be congratulated on their courage but thought of as foolhardy unless they live in New York.

6. As a further step to restrain patients who might spontaneously improve, it is important to offer warnings about the fragile nature of people and insist they might suffer psychotic breaks or turn to drink if they improve. When "underlying pathology" becomes the most common term in every clinic and consulting room, everyone will avoid taking action to help patients recover and patients will even restrain themselves if they begin to make it on their own. Long-term treatment can then crystallize them into therapeutic failures. If patients seem to improve even in long-term therapy, they can be distracted by being put into group therapy.

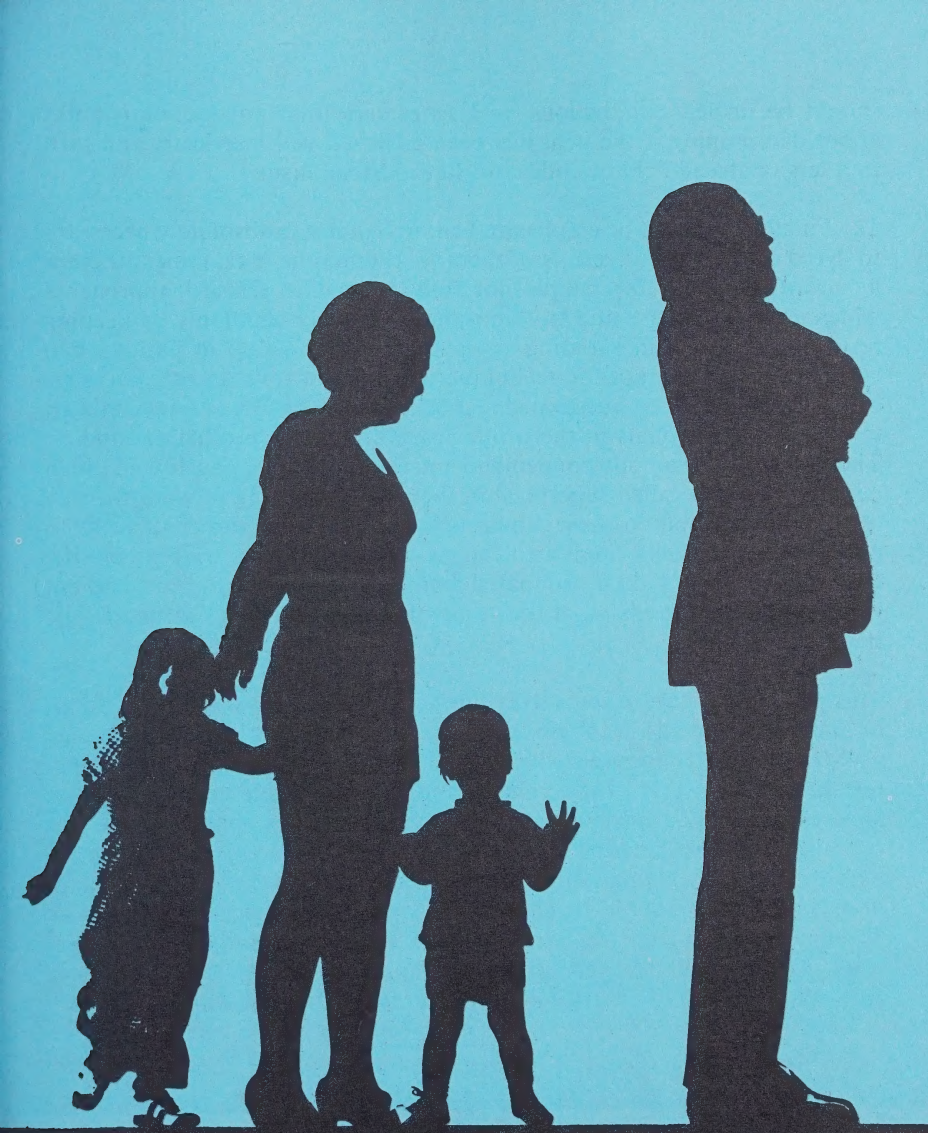
7. As a further step to restrain patients who might spontaneously improve, the therapist should focus upon the patient's past.

8. As yet another step with that aim, the therapist should interpret what is most unsavory about the patient to arouse his guilt so that he will remain in treatment to resolve the guilt.

9. Perhaps the most important rule is to ignore the real world that patients live in and publicize the vital importance of their infancy, inner dynamics, and fantasy life. This will effectively prevent either therapists or patients from attempting to make changes in their families, friends, schools, neighborhoods, or treatment milieus. Naturally they cannot recover if their situation does not change, and so one guarantees failure while being paid to listen to interesting fantasies. Talking about dreams is a good way to pass the time, and so is experimenting with responses to different kinds of pills.

10. Avoid the poor because they will insist upon results and cannot be distracted with insightful conversations. Also avoid the schizophrenic unless he is well drugged and securely locked up in a psychiatric penitentiary. If a therapist deals with a schizophrenic at the interface of family and society, both therapist and patient risk recovery.

11. A continuing refusal to define the goals of therapy is essential. If a therapist sets goals, someone is likely to raise a question whether they have been achieved. At that point the idea of evaluating results arises in its most virulent form. If it becomes necessary to define a goal, the phrasing



". . . nor is it necessary to include unimportant people, such as the patient's intimates, in the question of change."

should be unclear, ambiguous, and so esoteric that anyone who thinks about determining if the goal has been achieved will lose heart and turn to a less confused field of endeavor, like existentialism.

12. Finally, it cannot be emphasized enough that it is absolutely necessary to avoid evaluating the results of therapy. If outcome is examined, there is a natural tendency for people not fully trained to discard approaches which are not effective and to elaborate those which are. Only by keeping results a mystery and avoiding any systematic follow-up of patients can one ensure that therapeutic technique will not improve and the writings of the past will not be questioned. To be human is to err, and inevitably a few deviant individuals in the profession will attempt evaluation studies. They should be promptly condemned and their character questioned. Such people should be called superficial in their understanding of what therapy really is, oversimple in their emphasis upon symptoms rather than depth personality problems, and artificial in their approach to human life. Routinely they should be eliminated from respectable institutions and cut off from research funds. As a last resort they can be put in psychoanalytic treatment or shot.

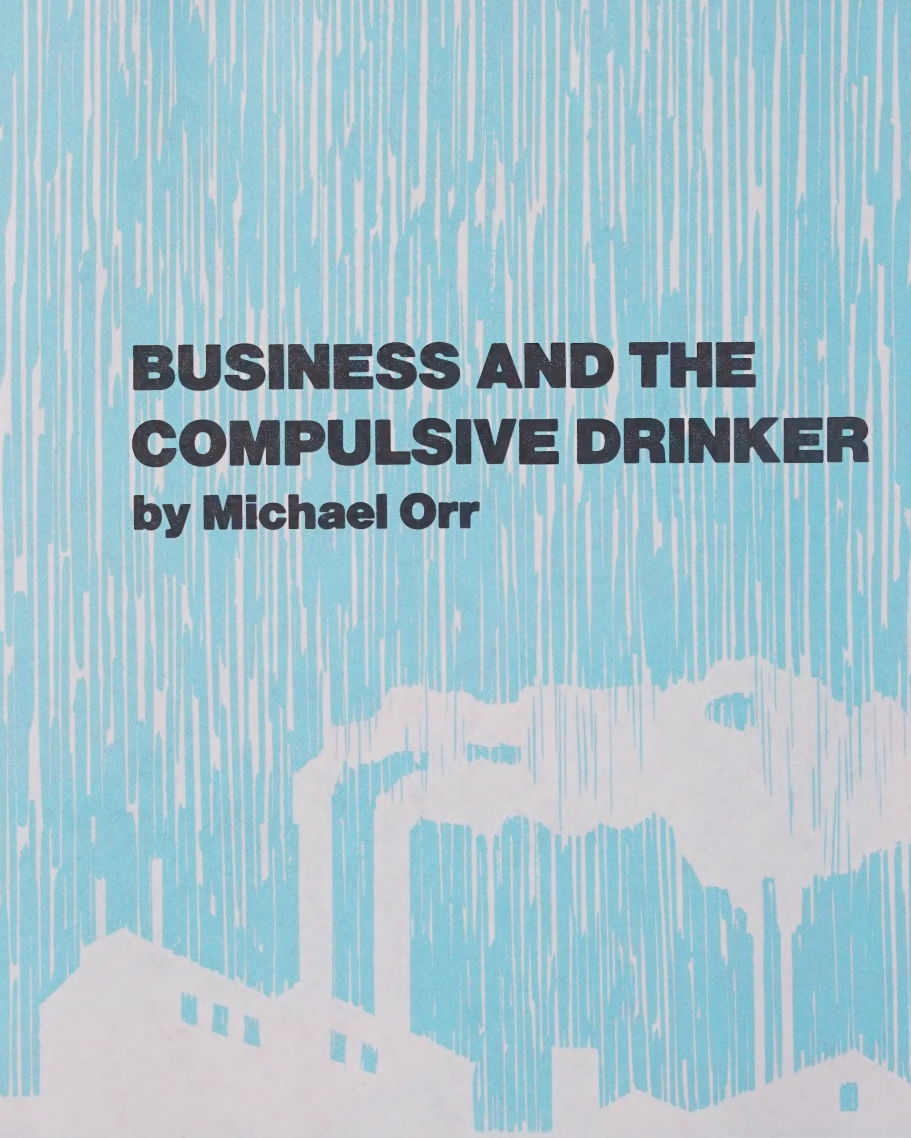
This program of twelve steps to failure—sometimes called the daily dozen of the clinical field—is obviously not beyond the skill of the average well-trained psychotherapist. Nor would putting this program more fully into action require any major changes in the clinical ideology or practice taught in our better universities. The program would be helped if there was a positive term to describe it, and the word "dynamic" is recommended because it has a swinging sound which should appeal to the younger generation. The program could be called the therapy which expresses the basic principles of dynamic psychiatry, dynamic psychology, and dynamic social work. On the wall of every institute training therapists, there can be a motto known as *The Five B's Which Guarantee Dynamic Failure:*

BE PASSIVE
BE INACTIVE
BE REFLECTIVE
BE SILENT
BEWARE

"Once a single method has proven consistently ineffective, it should never be given up."

BUSINESS AND THE COMPULSIVE DRINKER

by Michael Orr



Early detection of office and factory alcoholics is helping employers to save millions of dollars and to rehabilitate hundreds of lives.

A quiet, likable man, Bob Moyle had worked in the art department of an advertising agency for 20 years. But Bob had a drinking problem. He took a little longer at lunch than anybody else; and he was always first into the bar after work. At parties, he was "a happy drunk."

As his alcohol intake increased, his work began to suffer. The staff tried to cover up for him, but management finally began to take a second look at Bob. He was costing them money. Under pressure, Bob promised to cut down on his drinking, and did—for a month. When the agency suggested that he seek medical treatment, Bob agreed, but made only a token effort to see his family doctor. Finally he lost his job and disappeared. A year later the boys at the agency heard that he had died of a liver ailment. He was 60.

John Hedlan* was a different case. Starting as a salesman with a large manufacturing firm in Toronto, he quickly rose to a $20,000-a-year position. His productivity was high and a vice-presidency was hinted at.

But John fell into a drinking syndrome—two and then three double martinis at lunch and a "nipping" bottle to keep the glow on in the afternoon. His friends and associates pretended the reason was a temporary domestic problem. But soon the façade crumbled and his employer told him to seek help at a special clinic for employed alcoholics maintained by Ontario's Addiction Research Foundation.

Treatment worked. He admitted to his problem and stopped drinking. In a short while, he was reunited with his family and working again with energy and enthusiasm. John was on the road to recovery.

"Both men were afflicted with the same illness—alcoholism," says Frederick Horton, a psychologist at the Addiction Research Foundation. "One man died from it; the other did not. The difference was the availability of an effective program to help problem drinkers."

This article first appeared in *Reader's Digest* 100 (May 1972): 133-137. Copyright © 1972, The Reader's Digest Association (Canada) Ltd. Reprinted by permission.

Adapted from an article by Andrew Hamilton.

*Bob Moyle and John Hedlan are fictitious names.

In 1967 (the last year for which figures are available), the Foundation estimates that there were 308,200 alcoholics in Canada. This makes alcoholism the nation's fourth most serious health problem—after heart disease, mental illness, and cancer. Less than 10% of the nation's alcoholics are on skid row; the bulk are family men and women, high-school graduates and professionals, white-collar as well as blue-collar employees. As a result the direct cost of alcoholism to the economy amounts to millions of dollars a year in absenteeism, lost investment in training, and in overtime paid to others to do the alcoholics' work.

Fortunately, a substantial number of large Canadian organizations—including the federal government, Eaton's of Canada, Kodak Canada, Ontario Hydro, the Royal Bank, Imperial Oil, and Bell Canada—have adopted positive programs to help the alcoholic worker to save himself. Bell's program, established in 1951, has provided medical advice and treatment to hundreds of company alcoholics. Today, of the approximately 250 patients handled by its medical department each year, 55 to 60% are successfully rehabilitated (which, by Bell's standards, means two years' effective abstinence). "Normally, when an alcoholic reaches a community agency for treatment, he's hit rock bottom," says Dr. D.C. Bews, Bell's medical director. "We try to get to him before he's gone that far—while there's still a chance to save him."

A program being widely adopted by federal government departments and some private companies was developed in 1969 by Ann St. Louis, personnel counsellor to the Customs and Excise Division of the Department of National Revenue. Last year, it enabled 99 out of the 109 problem drinkers identified in the department to shake their dependence on alcohol—and stay sober.**

Such approaches regard alcoholism not as a moral weakness but as an illness—a definition which the Canadian Medical Association shares with the World Health Organization and other medical groups—whose progress interferes with a person's efficiency at work, his attendance record, his family, and social responsibilities.

**Copies of the *Manual for Supervisors on Alcoholism or Problem Drinking* can be obtained free from Mrs. Ann St. Louis, Department of National Revenue, Customs and Excise, Ottawa K1A 0L5.

Enshrined in company personnel policies, this view of alcoholism can become the basis of an effective rehabilitation program.This may take the form of an individual treatment plan tailored for the patient by the company doctor or, as is the case with Imperial Oil, the employee may choose treatment from his family doctor, a local clinic, or hospital. Most companies also work closely with the highly successful Alcoholics Anonymous organization.

Problem drinking doesn't usually show up until the 35-50 age bracket—a period when employees and executives are making their largest contribution to their work. From then on, it grows progressively more serious. "But," says an A.R.F. spokesman, "we are finding that under optimum conditions, between 60 and 80% of employed alcoholics *can* be rehabilitated." Moreover, these employees tend to maintain their sobriety and become more valuable to their companies than ever.

All Canadian provinces have sources of information on alcoholism, as well as available treatment centres. But the A.R.F., a provincial agency set up in 1949 to provide information, treatment, and research on alcoholism and drug abuse, is unique in maintaining a program specifically for the *employed* alcoholic. More than 60 Ontario companies and government departments have established joint programs with A.R.F.'s clinic on Toronto's May Street. There, in the past two years, some 400 Ontario employees suffering from alcoholism have received treatment. Of the first 100 referrals (those back on the job long enough for reasonable appraisal), more than 60 have returned to work at normal or improved productivity levels. Here's how the program works.

The first stage is training the supervisor to recognize the alcoholic on the job in A.R.F. seminars designed to provide information and guidance about alcoholism and its treatment in the work environment. So far, more than 1,800 company and union representatives have been taught how to spot the early warning signs of problem drinking, such as frequent Monday, post-holiday, and post-payday absences; erratic work habits and incomplete assignments; the aroma of alcohol; hand tremors; and gaps in memory.

The next step, if alcoholism is suspected, is to encourage the employee to seek help. Says Dr. Bews of Bell Canada: "The supervisor is one of the few people—perhaps the principal person—who can give the problem

drinker the necessary motivation." Applying what A.R.F. calls "constructive coercion," the supervisor personally approaches an employee whose productivity has clearly suffered and refers him to the company medical department for poor job performance. Once the doctor agrees on the nature of the problem, the patient is advised to enroll at the May Street centre "as a prerequisite for keeping his job."

The third stage is treatment. "When the patient arrives at the clinic," says Frederick Horton, "we explain that alcoholism is an illness which only *he* can arrest. And we tell him that the majority of his fellow drinkers who agree to treatment remain on the job during the process of recovery." Indeed, A.R.F. strongly emphasizes to employers that they *must* maintain the employee in his job to provide him with the financial and moral support necessary to his recovery.

For the first three weeks, the employee becomes an in-patient at the clinic so that he can "dry out" and receive any necessary medical care. During that time, his company pays the same sickness and disability benefits that are available for other types of illness. At this time, too, counselling begins, which the therapist hopes will uncover some of the root causes of the drinking problem. Discussions on alcoholism, psychological dependence, marital relationships, and even the patient's financial affairs follow. The man's wife and family may also attend some sessions to improve their understanding of his problem.

All being well after three weeks, the employee goes back to work, in most cases returning to the centre for further counselling and treatment as an out-patient.

While the majority of May Street's patients are from southern Ontario, some have been admitted from as far away as North Bay. To serve outlying districts A.R.F. has established 33 regional offices, many of which are able to provide out-patient services. When even the regional office is beyond the patient's reach, special arrangements are made with a local clinic for continuation of treatment.

At May Street the standard of successful treatment is whether or not the patient's performance has improved on the job. How effective, then, has the program been?

Although an interim report on the centre's first two years has just been completed, the Foundation considers any conclusion about its success premature. But the verdict from industry is encouraging. In the past two years, some 40 of the 57 Ontario Hydro employees admitted to May Street have been successfully rehabilitated under the constructive-coercion system —almost twice the rate achieved previous to May Street. Says Dr. Walter Prendergast, Eaton's medical officer: "It's early yet to draw scientific conclusions. But we're very pleased with the results. This is the most effective industrial rehabilitation program I've seen so far." Dr. J.F.S. Walmsley, medical director of Kodak Canada, agrees. "I think that the concept of constructive coercion as used in this program offers us the best opportunity yet to identify problem drinkers on the job *and* successfully rehabilitate them."

The Foundation anticipates that the May Street experiment will ultimately be used as a model for similar programs in communities across Ontario, with A.R.F. personnel acting in a counselling and advisory capacity. Inquiries from other provinces suggest that its example may soon be followed elsewhere in Canada.

For it is becoming increasingly evident to Canadian companies that an effective detection and treatment program for employed alcoholics is good business. Studies in the United States have shown that the average alcoholic costs his company anywhere from $1,500 to $4,000 a year. In most cases, he is only 50% efficient on the job, is absent 22 days a year, requires four times as much medical attention as a non-alcoholic worker, is seven times as likely to have an automobile accident, and lives 12 years less. If he is fired, or quits, the company must spend $1,500 to $2,000 to train a replacement. A.R.F. itself estimates that the alcoholic employee costs his company about 25% of his annual salary.

Says Earl Patton, program consultant at May Street: "What we have done is adopt an organized approach to a serious public health problem by speeding up detection and providing meaningful motivation. We've been very successful so far. Past experience suggests that we might expect successful rehabilitation in one or two cases out of five. With constructive coercion, we believe we can expect a success rate of three or four."

And each year an increasing number of Canadian employers are agreeing.

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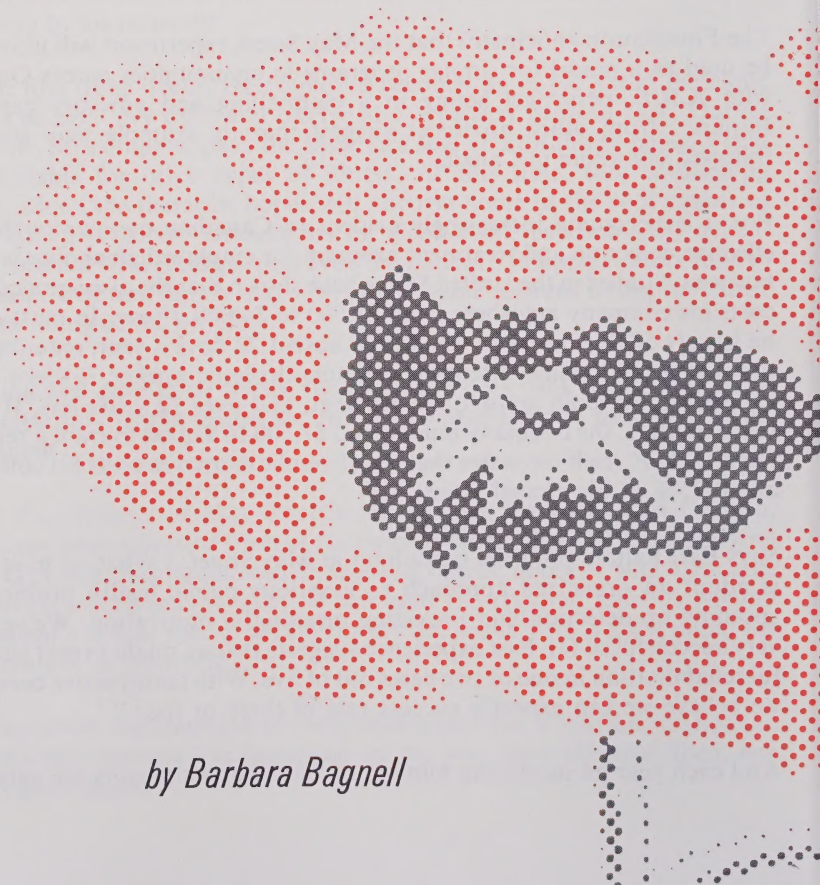

by Barbara Bagnell

A RISING TIDE?

For years Harry was a typical heroin addict. He was 44, a junkie for 14 years, had a criminal record, and was well known at the Salvation Army Hostel and the police station. Harry hasn't changed. He's still a heroin addict, still lives a hand-to-vein existence, but he's no longer typical of that apparently growing segment of the population who are heroin users.

The junkie of the 'seventies is on an average 18-23 years old, male more often than female. He may come from a close-knit, old-fashioned family. He may come from a trouble-prone family. He may hold a job. He may panhandle. He eludes the law a little more successfully—at least his name and face aren't

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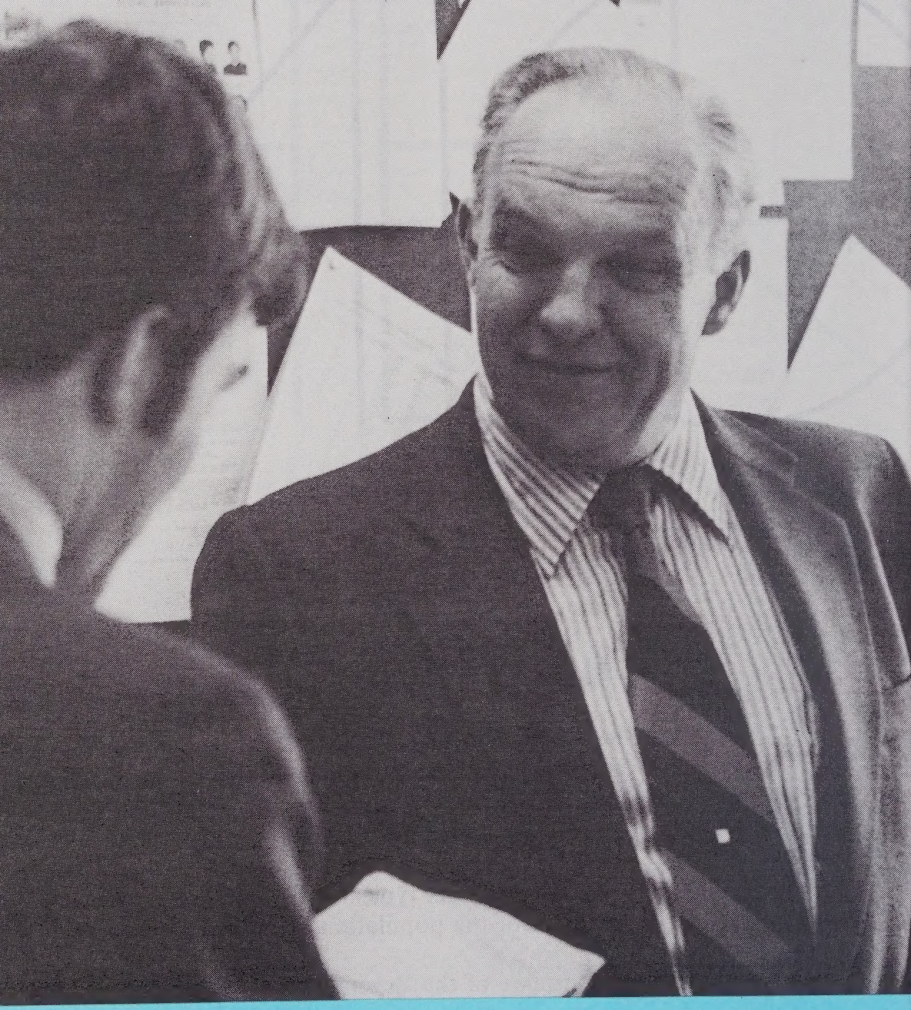
Mrs. Bagnell is a free-lance writer and regular contributor to *The United Church Observer*.



INSPECTOR JOHN WILSON, METRO TORONTO MORALITY SQUAD:

"The alarming thing I find is the youthful age of the users."

known to the cop on the beat. He may also be more informed about the trouble he's in and turn to some helping agency for treatment.

Joe—one of the new breed of junkies—did. He was 19 when he pushed open the door of Walk-in at the Addiction Research Foundation's Clinical Institute, 33 Russell Street, Toronto, and told his story to Mr. George Atto. The child of immigrant parents, Joe had quit school at 16 when his father died and drove a truck to support his mother and sisters.

His work was heavy and exhausting and some experimenting with marihuana among friends proved an escape from burdens. He used mescaline and speed prior to heroin and considered himself a "fun user," never a drug freak. It wasn't long before his expensive habit forced him into small time dealing. He'd buy five caps, sell four at a profit, and use one. He'd been on heroin nine months when he realized he was in trouble. With the aid of a small experimental program for short-term users at the A.R.F., he was helped.

This is an isolated and probably untypical "happy ending" in a situation recently termed, by a C.B.C. series on the subject, "The Heroin Crisis." Most people who have anything to do with the subject will affirm that heroin is widely available, that it is being used by large numbers of people—the majority of whom are in their late teens and early twenties.

Between July and October, 1971, 67 people or 14% of the new patients of the Walk-in Clinic were there because of heroin. They were outnumbered only by speed users; 43 of that 67 were diagnosed "addicted."

Figures for the city, province, and country are as elusive as dandelion seeds in the wind. Those available are usually subject to some kind of qualification. James Moore of the Le Dain Commission puts the national figure at 10,000—published in *Treatment: A Report of the Commission of Inquiry into the Non-Medical Use of Drugs* (Ottawa: Information Canada, 1972) p. 30—and calls it a conservative figure. According to the Narcotic Control Division of the Department of National Health and Welfare, heroin addicts in 1971 numbered 6,696. This figure is computed by counting those who come to the attention of the police—therefore, it's inevitably a low one. (American figures indicate that over 2,000,000 in the U.S.A. have

tried heroin; 1,500,000 were of high school age—6% of all young people between 12 and 17.)

In Toronto, *The Toronto Daily Star* reports "police drug investigators" as saying that the number of heroin users in the Metro area has reached at least 3,000 and is growing at "a frightening rate." Inspector John Wilson of the Metro Toronto Police Morality Squad, feels that the figure is a little high, but he confirms that there has been a significant increase in the past couple of years from the 250-300 addicts well known to police three or four years ago. "Heroin is getting to locations where we never had it before," he says. "Some of it is diluted but it's part of the overall drug scene. The alarming thing I find is the youthful age of the users."

Researchers working in the addiction field are cautious where numbers are concerned. Researcher Gus Oki of the A.R.F., who is collecting data on heroin use, is reluctant to estimate. He *will* say that when he did a similar study in 1967-1968 he found that the R.C.M.P. were unaware of a substantial portion of the heroin-user population and he suspects now that their figures would be even less comprehensive.

To turn this statement around, R.C.M.P. Staff Sergeant L. H. Morse of Toronto says the figure he uses is 3,000. This is for Ontario including Metro Toronto and that the figure is based on clinical as well as police information. He calls it a "guess-timate."

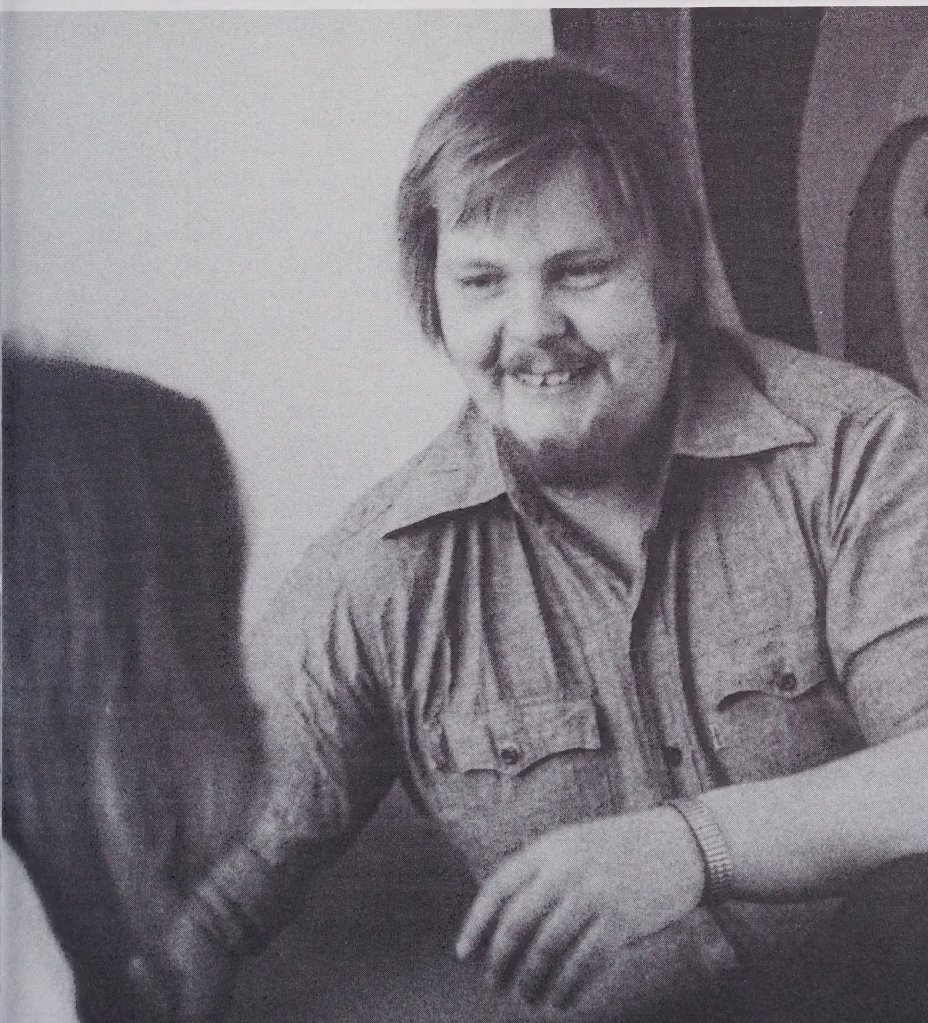
R.C.M.P. Commissioner W. L. Higgitt has estimated that there are about 15,000 hard-line heroin addicts in Canada. In 1971, police seized 148 pounds of heroin worth $75,000,000.

All educated-guessers say that heroin is being used by younger and younger people. Rumors circulate concerning a 13-year-old heroin user, and one 16-year old presenting himself to a Toronto clinic claiming he'd been on heroin for two years.

In October, 1971, A.R.F. attempted to pool and assess the rumors, impressions, and facts about trends of heroin use in Ontario. Staff from the Foundation's clinical programs all over the province met with people from the Department of National Health and Welfare and the Committee of Inquiry into the Non-Medical Use of Drugs. Rigid scientific data and proof were lacking but the rumors, impressions, and sparse facts tended to com-

MR. GEORGE ATTO, CHAIRMAN, A.R.F. WALK-IN TEAM:

They [the Italian young people] tend to spend little time on other drugs before they use heroin. Its accessibility in the community is responsible.



pliment and confirm each other. From 1959 to 1969, the number of heroin users in Ontario remained constant. In 1970, the figure jumped 20%. In the whole country the rate of increase that year was 30.7%. At the same time, the age of users dropped dramatically, from 39.4 years (the mean age back in 1967) to 17-22 years.

It appeared that heroin is potentially available from pushers all over the Province, and is promoted by organized distribution networks. Most of it comes in to Montreal from Marseilles where it has been processed from Turkish opium; from Montreal it is shipped to other areas of Canada and the U.S.A.

"The distribution of heroin . . .," that meeting concluded, "appears to be controlled by Italians as part of the larger scene of organized crime." This is not the only place the word Italian comes up in a discussion of heroin. At 730 Yonge Street, Mr. Al Everson, Director of the Narcotic Addiction Unit, says a lot of his patients come from the St. Clair-Keele-Lansdowne area of Toronto. This is where the police make successful raids. This is where Italians live. Mr. Atto agrees. About one-third of the kids arrested in a large "bust" in that area recently were his patients—Italian young people.

They tend, he says, to spend little time on other drugs before they use heroin. Its accessibility in the community is responsible. "Heroin use is higher there than in any other sector," says Ken McMullin of C4 Project (an outgrowth of Digger House). "But they traffic mainly in their own community."

Despite Staff Sergeant Morse's impression that most of those 3,000 addicts are in Toronto, the Foundation staff reported "significant, established, and expanding" heroin use in Windsor, London, Niagara Falls, and possibly Kingston. The Narcotic Addiction Unit has as well had patients from Hamilton and Oshawa. It was the feeling of that October meeting that there may also be significant problems in smaller cities and towns. In some cases the ratio of known users to the general population is high.

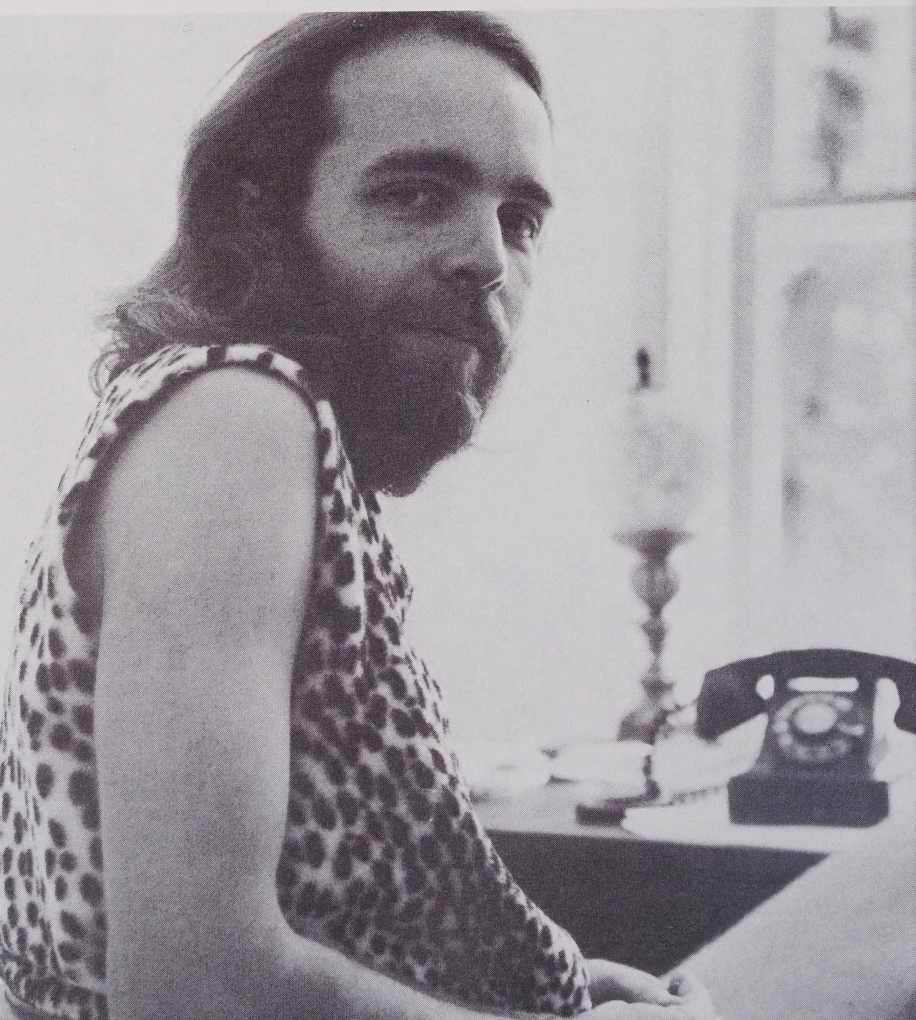
It is said that if you want heroin you can find it—in schools or on the street—but it appears, according to that report, to be concentrated in two north-south strips along Bathurst and Keele Streets and in the downtown area.

MISS SUE GAFFE, SOCIAL SERVICE WORKER, A.R.F. NORTH METRO BRANCH:

. . . there are no common denominators in the backgrounds of kids on heroin.

KEN MCMULLIN, YOUTH WORKER, C4 PROJECT:

"In the suburbs, it's weekend use. Down in the centre of the city, it's addictive use."



Main-lining (injection into the vein) is the main method of using heroin, but it is also sniffed. Sniffers tend to feel it's a less serious use than using a needle, but sniffers can become addicted. "It's Russian roulette," says Mr. Atto, "and they get infected noses, rather than infected arms."

Recreational sniffing or even injecting without addiction is possible, but risky. Generally workers in the field identify three degrees of heroin intake: (1) the trial user who wants to find out what it's like and stays away from it in the future; (2) the recreational user who takes heroin only occasionally or only on weekends (Mr. Oki says that many entertainers have been recreational heroin users for "decades"); and (3) the habitual or chronic user who is dependent on heroin, who, almost literally, cannot live without it.

Any one or all of these groups may experiment with or use regularly other drugs such as amphetamines or barbiturates. Criminal activity such as robbery often accompanies the dependence on heroin, rather than preceding it.

Despite the fact that downtown Foundation workers consider that heroin is mainly in the west and north-west areas of Toronto, and that the north-east suburbs such as Don Mills and Scarborough tend to be amphetamine areas, Miss Sue Gaffe of the A.R.F.'s North Branch (Willowdale) encounters heroin often in her work.

A 22-year-old former teacher, she spends most of her time where kids are found—youth centres, schools, plazas—in the "peanut" area of Don Mills where she formerly taught. She's been on the job 1½ years and sums up the heroin situation in that time by saying, "It has gone from practically nothing to lots." She works with the North York General Hospital where heroin problems are referred, and finds there are no common denominators in the backgrounds of kids on heroin. "A number are from Jewish homes, some from close Italian families, some from sick family situations, some from apparently normal ones—the backgrounds are varied," Sue says, "but parental reactions are standard—panic."

Ken McMullin says that in May, 1971, there was a sudden and large increase in the amount of heroin available on the streets. Use, in his experience, tends to be of multiple drugs and the users are "addicted people" rather than straight heroin addicts. "Last year's speed freak is this

year's heroin user—the year before that he was dropping acid. They're young kids but they've been on the street awhile," he says.

"In the suburbs, it's weekend use," he continues. "Down in the centre of the city, it's addictive use." The price he says usually rises during May as police raids become more effective—in the middle of May this year it was $10-$15 a cap. Then, as summer travel begins and border points are harder to check, summer supplies are brought in more easily and the price decreases.

Treatment

Theories of treatment vary. Most heroin users presenting themselves at the Foundation's clinic ask for withdrawal in a hospital setting. "This creates problems," says Dr. Donald Meeks, Associate Director (Social Work) of the A.R.F.'s Clinical Institute, in a recent paper entitled, *Nature and Extent of Heroin Problems*, "since we have no reason to believe that withdrawal without commitment to a program of treatment, which includes and goes beyond withdrawal, is particularly helpful."

His belief is supported by the fact that of the patients admitted during a six-month period for withdrawal but not committed to further treatment, over half discharged themselves.

The Foundation's methadone-maintenance program is carried on at 730 Yonge Street under the direction of Mr. Everson. They have an active case load of 100 patients. In just under 2½ years, 250 people have been on the program. Ages have ranged from 18 to the 70's. Over 450 have applied. The great majority of these are heroin users. For certain hours of every day, patients walk into the pleasant suite that overlooks the bustle of Yonge Street and sip three ounces of orange juice which contain on an average 100 gms of methadone. There are two important components to this program apart from the use of methadone, which when taken orally prevents the addict from obtaining a high when he uses heroin. These components are psycho-social care and constant monitoring of the use of psychoactive drugs. The latter is done by examining, with special chemical methods, urine that has been passed under supervision.

The use of methadone maintenance is controversial and open to abuse. For young addicts who have not been addicted to heroin for a lengthy time, it is questionable whether they should switch from one addictive drug to

DR. JAMES RANKIN, DIRECTOR AND PHYSICIAN-IN-CHIEF,
A.R.F. CLINICAL INSTITUTE:

"If the trend continues will Ontario become the same as British Columbia or New York . . . ?"

another. On the other hand, the lives of some addicts have been restored to normalcy and productivity on a methadone program which could conceivably last the rest of their lives. It's certain that such a program requires tight controls and cross-checking to make sure that an addict is only being treated by one program.

It was estimated at the October meeting of A.R.F. personnel that in the city of Windsor there are 100 illicit methadone users, 20 of them addicted. Careless practices by prescribing physicians have led, in some areas, to a whole new drug traffic—the sale of methadone. There is a case on record of a "husband and wife team" of heroin addicts who were prescribed, all at once, a 50-day supply of methadone *each*. Only 21 days later they returned to the doctor and were given another 200 tablets each.

As of June 1, 1972, this hazard has been decreased by the Federal Government's new regulations on methadone. Any doctor wishing to prescribe methadone has to be authorized by the Department of National Health and Welfare.

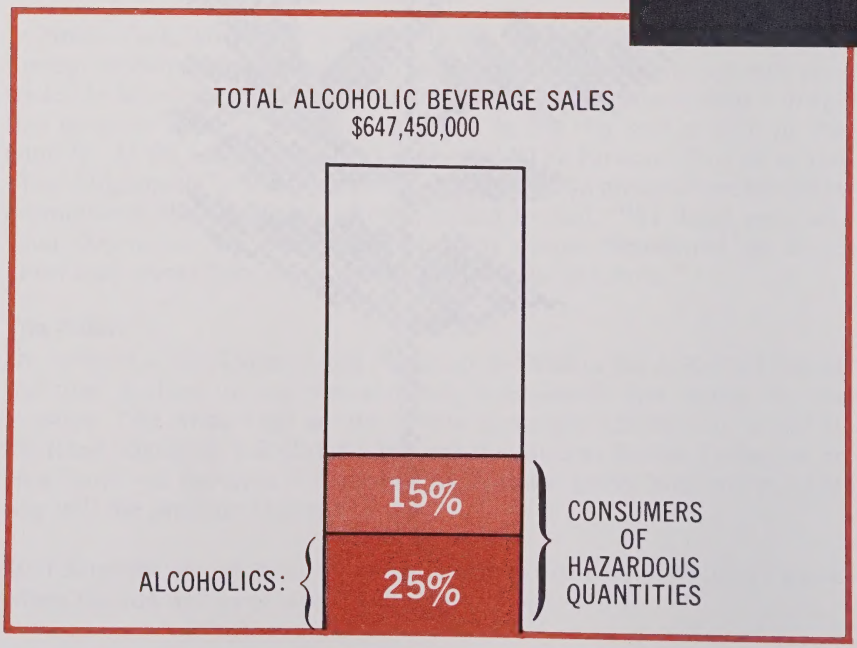
In North York, Miss Gaffe's work with the hospital's heroin admissions is therapy-oriented—individual or in groups, but groups that are not restricted to heroin users. Ken McMullin's proposed C4 project plans a drug-free program using a detoxication centre in the city and a farm in the country. At the federally (L.I.P.) supported "The Process: Church of the Final Judgement," a sort of counter-culture religious group where heroin is encountered, the "Brother" whom I talked to said, "We don't even ask what they're on. We simply treat them as people. Sometimes we don't know until weeks later that a certain person was on heroin."

The Future

Dr. James Rankin, Director and Physician-in-Chief of the A.R.F.'s Clinical Institute, declines to say the situation is explosive and muses on the question, "At what stage are we in this apparently continuous trend? If the trend continues will Ontario become the same as British Columbia or New York—is the crisis still ahead? As Toronto grows how and in what way will the problem change?"

Staff Sergeant Morse sums up the ambiguities involved: "We don't know where the end will be or where the beginning was."

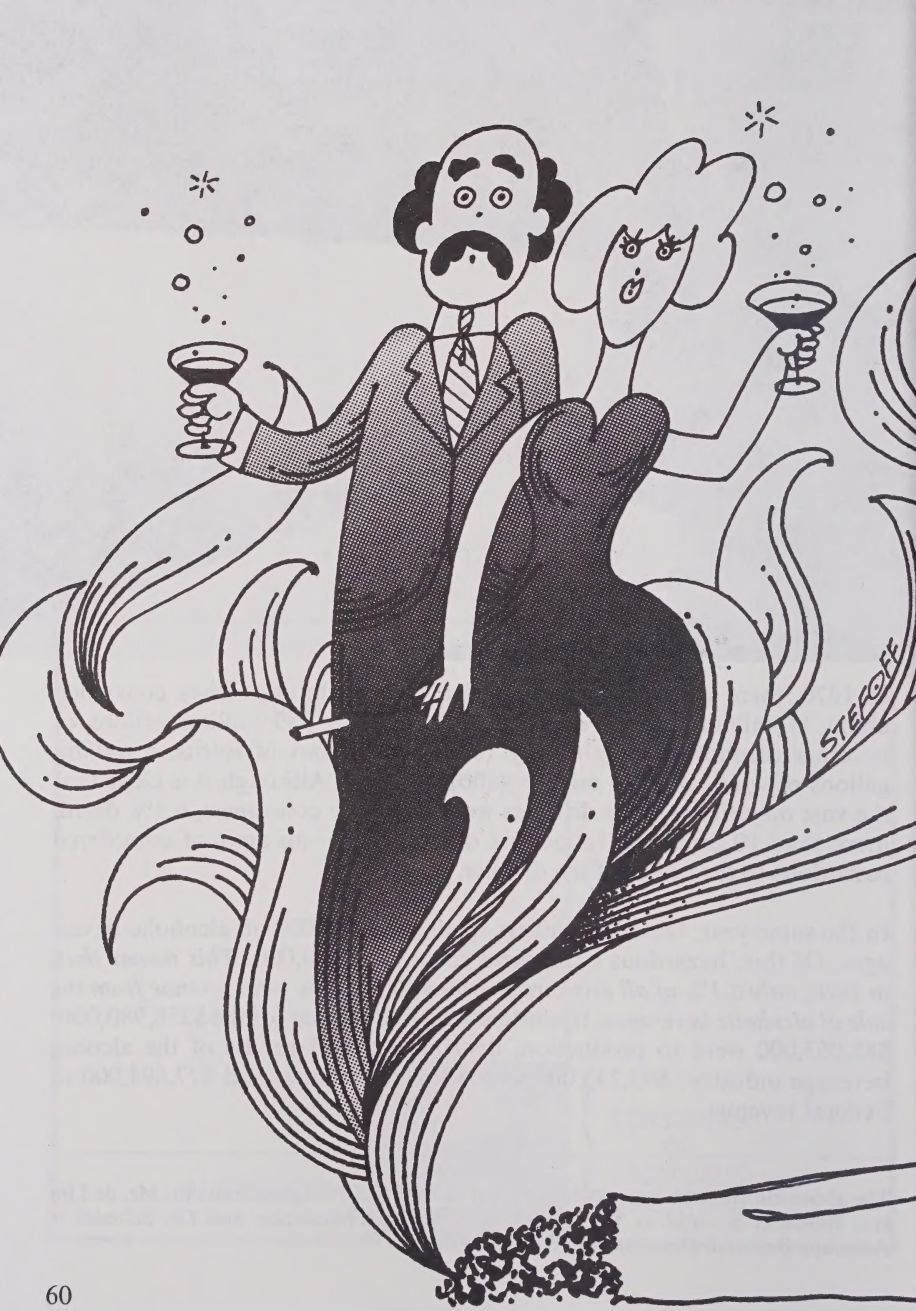
WHO'S PICKING UP THE TAB?



In 1970, there were over 4 million drinkers in Ontario. They consumed about 11 million gallons of absolute alcohol or 139 million gallons of beverage alcohol—approximately 10 million gallons of spirits, 6 million gallons of wine, and 123 million gallons of beer. Although it is clear that the vast majority of these drinkers were moderate consumers, 6.1% drank more than 10 centilitres (about six drinks) daily—an amount considered hazardous to the health of the drinker.

In the same year, Ontario drinkers spent $647,450,000 on alcoholic beverages. Of this, hazardous consumers spent $258,980,000. *This meant that, in 1970, only 6.1% of all drinkers provided 40% of the total revenue from the sale of alcoholic beverages.* It is interesting to note that (of the $258,980,000) $88,053,000 went to production, distribution, and profits of the alcohol beverage industry; $93,233,000 to Provincial revenue; and $77,694,000 to Federal revenue.

The above information was provided by Jan de Lint and Wolfgang Schmidt. Mr. de Lint is a Research Scientist at the Addiction Research Foundation and Dr. Schmidt is Associate Research Director (Social Studies) there.


STEFOFF

Let's Take the Heat Off Parents

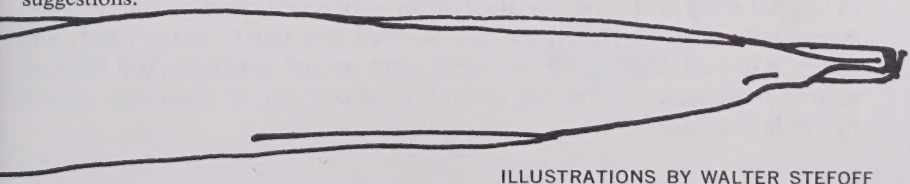
Thoughts about Parents, Children, and Drugs

BY LOIS ADAIR

A decade ago, most of us probably thought that the term "drug abuse" meant simply the practices of a few confirmed opiate addicts in certain waterfront areas. There seemed to be little awareness, among members of the general public, that the same expression might also apply to heavy cigarette smoking or to the abuse of alcohol, sleeping pills, diet pills, or tranquillizers. Except among scientific and clinical people in the addictions field, smoking was just smoking, and alcoholism—though deplored—was scarcely a form of *drug* dependence. As to problems with some of the mood-modifying prescription drugs, few of us gave them a thought.

Mrs. Adair is a free-lance writer and editor specializing in the fields of alcoholism and drug dependence, education, and medicine. She is also the mother of two children. For three years she was a member of the education staff of the Addiction Research Foundation.

The author wishes to thank Dr. Oriana Kalant and Dr. Harold Kalant for their kindness in reading the manuscript while it was in preparation and for offering many helpful suggestions.



ILLUSTRATIONS BY WALTER STEFOFF

There is no doubt that, over the past three or four years, many people have come to realize that drug abuse can refer to the misuse of many more "respectable" chemicals like alcohol and sleeping pills, as well as to the use of such drugs as heroin. By and large, this new appreciation of the dangers associated with "legal" drugs is a good thing. And interestingly, it is probably in large part a result of campaigns in schools, communities, and the media which were primarily designed as responses to the near-panic of the late 'sixties over youthful use of marihuana, LSD, and speed.

Many of these educational efforts covered a wide range of drugs. They properly defined the term "drug" in such a way as to include even such commonly accepted substances as alcohol, cigarettes, and various pills. There is certainly a new awareness, as a result, that heavy use of such drugs may well constitute drug abuse. But I think it is time now to stress that it is *heavy use* we mean. It could be harmful if any use—even moderate use—were somehow to become a handicap for parents who are trying to do the legitimate job of preventing school-age children from using illicit drugs such as marihuana or LSD.

The Broad View: Useful to a Point?

I think that when the youth-and-drugs panic hit a few years ago, it was probably important to point out to parents that the young people involved were not totally depraved, not totally alien to their society. The discovery, in those days, that one's child "took drugs" was incredibly shocking. The parent needed to be told that his child's behavior was not, after all, utterly unprecedented, utterly removed from all that was familiar. Perhaps the father or mother could cope better with the problem if he or she could be taught to see it more calmly, to think of it as simply a manifestation of a tendency already widespread in our society: the abuse of drugs generally, including alcohol, nicotine, and barbiturates.

The trouble with this, as a form of public education, is that it might in time lead to a too-casual acceptance of the youth-and-drugs situation as unalterable. People soon became aware that much of what they'd heard earlier about drugs like marihuana was false. They also began to realize that adult drug problems like alcoholism were much more widespread and more damaging. Perhaps they had worried too much about youth and drugs. After all, adult drug problems were probably worse. And then, of course, there were reports that juvenile drug use was, in some way, caused by adult drug use.

Whose Fault Is the Drug Culture?

Recently, it has seemed that nearly every time I pick up something to read I run across at least one article suggesting that adult users of "respectable" drugs are somehow to blame for youthful drug abuse. Another point of view that is sometimes presented is that the problem of alcohol abuse is so bad that, by comparison, marihuana is scarcely worth worrying about.

One sometimes finds one or other of these viewpoints in newspaper reports of community meetings. If the topic of drugs is on the agenda, someone seems bound to get up and say that we can't really blame the kids, and to follow this up with the statement that adults take a lot of sleeping pills and tranquillizers. There will commonly be the suggestion that the prescription drug situation, or the alcohol situation, is at the root of the pot situation. Usually, however, it is not made clear just what the connection is, or whether parental drug use is being nominated as *the cause* or merely as *one of the causes.*

Publications for housewives have also been directing attention to adult drug use. Not long ago, one had a special section devoted to information about prescription and over-the-counter drugs, listing effects, side-effects, and hazards. It gave useful emphasis to the danger of assuming that what is legal and easily available is necessarily harmless, however used.

Another approach is to lead into the subject of adult drug use through the topic of drugs and 'teens. This second kind of article probably is useful, too, in that it awakens some readers to the danger of careless use of alcohol and/or prescriptions. However, some of them seem also to communicate a feeling of uneasiness about parental behavior in relation to that of youngsters. The general tone of these articles—and particularly of some of their headlines—would almost seem to suggest to the casual reader that there might be something risky about having a before-dinner drink or taking certain prescribed medications in the presence of one's children. I doubt if the authors mean to create this impression. Perhaps what is needed, in some cases, is a clarifying statement, prominently displayed, to the effect that ordinary and careful use of alcohol and mood-modifying prescriptions is not what is being presented as alarming.

Professional journals sometimes reprint bits from newspapers or from other journals, with an editorial comment above the excerpt. Not long ago I saw one where some damning statistics about alcohol abuse were re-

printed, under the heading "And we worry about pot." I can appreciate the point of the comment. Alcohol abuse still does cause much more damage than any other form of drug abuse. However, if a talented young person's life becomes centered on trip-taking, it is cold comfort to his worried relatives to know that alcohol is involved in an increasing number of accidents and that the incidence of alcoholism is climbing. A broad understanding of drug problems certainly enlarges a person's outlook and his tolerance. But past a certain point, I think it is not very useful to stress the comparative viewpoint. We need to see things as a whole, certainly; we also need to see them separately.

A Hard Life for Parents

What bothers me about treatments of this subject in the media is the feeling that they may be making life harder for a rather harried group of people: the parents of teenagers. Surely we, as parents, have burdens enough without adding to them certain kinds of confusion and guilt that may be quite undeserved.

Could it be, even, that an excess of publicity about real and not-so-real parental failings might actually be making it more difficult for us to perform the ordinary parental duty of discouraging the use of illicit drugs among our children? After all, if a parent has, rightly or wrongly, feelings of uneasiness about his own behavior, it probably makes it harder for him to set limits for his youngsters. And this will be especially so if he knows they are ready to use his behavior as a rationalization for their own.

Finally, isn't the whole business of blaming the behavior of one group of people for the actions of another group being rather overdone? It seems to me that too much of what we see, hear, and read these days offers subtle encouragement—to teenagers and to the rest of us as well—to try to escape a reasonable degree of responsibility for what we do. Too many people are described in the media, and even in casual conversations, as being "the way they are" because of the H-bomb, their parents' mistakes, and pollution. There's usually a little truth in such statements, of course, but I am weary of overemphasis on it.

Drugs and Children

My concern, here, is *not* with the overall question of drug use: whether it is good or bad for individuals or for society, whether this drug or that should be legalized for adult use. It is, rather, in the much more limited

question of the use of illicit drugs by school-age children living in their parents' homes—and in what their parents can do about it. After listening for years to the arguments of those who favor more liberal laws, it is easy to lose sight of the basic difficulty that faces *parents* however such questions may be resolved.

To put it baldly, most parents simply do not wish *their youngsters* to use the "recreational drugs of youth"—or alcohol or tobacco either, for that matter. Apart from carefully supervised use of prescriptions and apart from the practice of some European immigrants of giving children a little wine with meals, it is not acceptable in our society to permit children the use of drugs, legal or illegal. Most parents see marihuana, LSD, speed, etc. as substances that cannot conceivably be of benefit to the health of their children—and as chemicals that may possibly cause harm one way or another. Most parents are keenly conscious also of the legal problems that can arise. The conscientious parent therefore has the task of discouraging his children from using these drugs, and in this he will need some support from society.

In dealing with the drug problem, parents not surprisingly may encounter opposition from certain peer groups with which their children may come into contact. (Illicit drugs are, among other things, a fad.) But if parents could count on the whole-hearted support of society in general, as reflected in the media, for example, perhaps the problem would not be too difficult. It would be helpful if there were more emphasis on the fact that surveys indicate that *most* youngsters *do not* use illicit drugs.

However, if the media are constantly pointing out to adults and, inadvertently, to *children*, that adult drug use is somehow worse than that of the "turned on" generation and that adult drug use may even be "the cause" of juvenile drug use, the result may be that the parent's confidence is gradually, though subtly, undermined and the child is provided with a ready-made alibi for whatever experiments he might undertake. A parent who might once simply have laid down firm rules may now back away from clear statements of family policy about drugs. A parent who might once have expressed in no uncertain terms his horror of law-breaking may have less to say on the subject once he has learned to feel "to blame."

Are Adults the Cause?

Just how much truth is there, anyway, in the notion that the drug problem

pervades society, the contention that adults are the worst abusers, and the suggestion that it is the poor example set by adults that causes children to turn to illicit drugs?

There is no doubt that there are drug problems in all age groups. The largest ones are the smoking of cigarettes (by young and old) and the misuse of alcohol (again by young and old, but mainly by older people). However, I think that many young people have somehow been encouraged to believe that *any use* of alcohol on the part of their elders constitutes *misuse* sufficient to justify drug-using behavior on the part of the young. This is what lies behind such statements as, "You've got your martini; I've got pot."

Similarly, some adults undoubtedly have developed the habit of taking an up-pill for this, followed by a down-pill for that. However, this does not mean that every adult who takes a tranquillizer or a sleeping pill on doctor's orders is a drug abuser. The development of a climate in which one must somehow apologize for simply following a physician's instructions seems most unfortunate.

The Well-researched Martini

Like many other people of my generation, I simply refuse, even yet, to buy the suggestion that there is no real difference between the adult's martini and the youngster's joint. In fact, there are several. Let me list briefly some that I can think of.

1. Martinis have been well researched over the years. We have a reasonable idea of what they are likely to do (or not do) to a person in the short range and the long. The long-range effects of regular pot-smoking are simply not that well understood.

2. To date, orderly drinking by adults in appropriate circumstances is legal, whereas use of pot is not. (It should also be remembered, in this connection, that use of alcohol and cigarettes by youngsters is illegal too.) Surely there are not many parents who want their children to think they can pick and choose at random among the nation's laws.

3. According to many writers on the subject, there is a vast difference in the manner in which people in various age groups are affected by mind-altering drugs. The adolescent is, almost by definition, a person who is

going through a difficult period. He faces and must learn to deal with many different kinds of emotional crises. If, during this developmental stage, he has frequent recourse to chemical escape, whether it is in the form of alcohol or marihuana or any other mind-altering drug, he is likely to miss some valuable learning experiences in the emotional area. Without them, he may have difficulty in becoming mature and in dealing, later on, with some of the problems he will encounter as an adult.

These, at least, are the reasons why I will not admit that youthful pot smoking and the moderate adult use of alcohol are "the same thing." Both aim at relaxation, at freedom for a time from everyday cares. But the similarities pretty well stop there, unless we are willing to accept the scapegoating approach to the drug problem that seems to blame the whole thing on "bad examples."

The evidence is not clear as to just how important adult abuse of drugs actually is as a cause of youthful drug abuse. Youngsters seem to get involved with drugs for a variety of reasons: because of peer group pressure, out of curiosity, out of a youthful propensity for risk-taking, or out of a desire to "defy the establishment." No doubt many of those who become most deeply involved are in some way disturbed to begin with.

It is true, of course, that there is a tendency for children to model their behavior on that of their parents. This seems to apply to the use of alcohol and other drugs as much as to other kinds of activity. It would seem reasonable, then, to expect the majority of children of *moderate* users of "adult drugs" to do, when they reach adulthood, much as their parents do now. I would predict that most of them will be moderate drinkers and reasonably careful users of physicians' prescriptions. If some of these children decide, as young adults, to try an illicit drug such as marihuana, probably because it is "the thing to do" in a particular group of young people, it seems unlikely they will become heavy users or switch to intravenous use of something like heroin or speed.

Probably a really bad parental example does play a part in development of serious drug problems among the young. But the notion that ordinary, reasonable parental behavior with alcohol and/or prescription drugs could be playing a major role is surely unrealistic.

A Need for Understanding and Support

Publicity about the abuse of legal drugs is clearly needed. People need, for one thing, to know that the damage to public health caused by the abuse of alcohol seems inevitably to increase as overall consumption increases. They should know that we will probably have to decrease our overall level of alcohol consumption in order to cut down by very much the incidence of alcoholism. But more care is needed in the handling of this subject. Surely the case against the abuse of alcohol is sufficiently strong that it can stand on its own. Anyone who understands that it can cause illness, injury, incalculable social damage, and even death does not need to be told that it is dangerous on any other ground. The same applies to a person who is given an accurate picture of what can happen if he abuses sleeping pills. Why not let this information stand on its own, especially if the additional propaganda just makes it harder for many people to cope with a problem that may affect the health and well-being of their children?

Parents, like young people, need understanding from those around them, and the help and support of society. They do not need implied criticism concerning behavior which is, in most cases, within the bounds of moderation and common sense. Confidence in themselves and in the values they stand for are necessary, if they are to perform as parents. And if they do not, we shall all feel the effects.

The Addiction Research Foundation of Ontario, established in 1949, is an official government agency financed by annual Provincial grants. Its purpose is to learn more about the effects of alcohol and other drugs and to develop improved ways of preventing and managing alcoholism and drug dependence. Helpful information about these matters is available from A.R.F. offices located in:

Brantford (759-3930)
Chatham (354-1000)
Cornwall (932-3300)
Dunnville (774-7596)
Guelph (821-9661)
Hamilton (525-1250)
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Kenora (468-6372)
Kingston (546-4543)
Kirkland Lake (567-4242)
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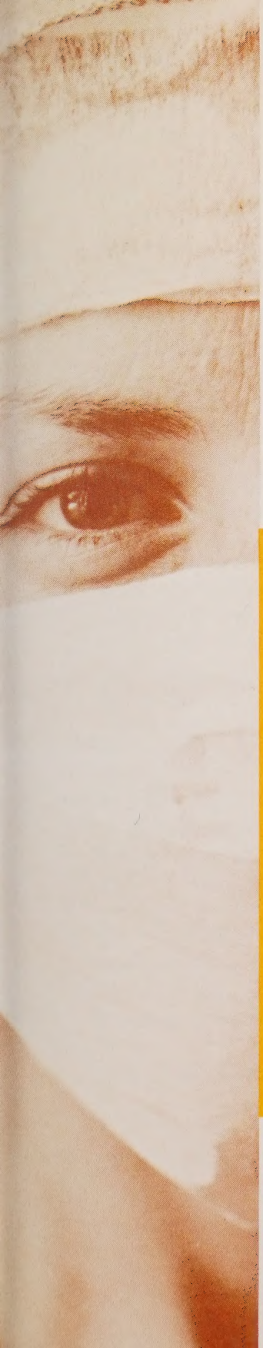

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The great drug debate appears to have moved full circle. Public concern which led, among other things, to the Commission of Inquiry on the Non-Medical Use of Drugs, now has an answer. Admitting the complexity of the issues and competing values involved, Dean Gerald Le Dain has said, "There is no way that this kind of decision can be passed over to experts. In the end it will have to be handed back to you."

Addressing the Canadian Conference on Social Welfare, this Foundation's Executive Director, H. David Archibald commented ". . . in the final analysis, decisions respecting the non-medical use of drugs will have to be made by the average citizen of this country."

Fine. But how? What is the process for involving the average citizen in discussion, debate, and decision?

The prospect of elections, both federal and provincial, suggest one way. Aspiring legislators could well invest some of their campaign time and energy in sounding out their constituencies on this issue. If, as it has been said, the people get the government they deserve, it is probably also true they get the kind of campaign they condone. Indifference, apathy, and cynicism allow social issues to be exploited rather than analysed; result in promises instead of planning.

Is it too much to hope that responsible election campaigns could yield informed public discussion and—if not decisions—at least a sense of direction for the decision makers? And what will be the role of the more than one million new electors, the 18- to 20-year-old group? Will their discontent find a focus that challenges traditional campaign ambiguity and evasiveness in the pursuit of clarity and conviction on the part of the candidates? Or have young people squandered the once valid process of confrontation on trivial issues?

Is it possible that decisions, in effect, have already been made?

L.A.P.

editorial

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PLACEBO

by BERTON ROUECHÉ

Considering its importance, the "placebo effect" of drug use has received little attention. We reprint here one of the best articles which we have found on this topic. Despite the fact that it was first published 12 years ago and that Mr. Roueché uses the word "placebo" in a broader sense than that which is commonly understood by the medical profession, the information reported here is highly relevant. The placebo effect remains one of the more important aspects of research in psychoactive drugs.

Editors.

The most widely used drugs in the modern medicine cabinet are not really drugs at all. They are mere accommodations. This is not to say that they are ineffective. Their use is often followed by incontestably salubrious results. They are, however, chemotherapeutically inert. They either possess

RATIONS BY WALTER STEFOFF

no curative powers whatever or have none that are contextually relevant. The remedial vigor that they seem to manifest is as insubstantial as thought. Like that of the witch doctor's mask, the potentate's touch, and the food faddist's yeast and yoghurt, it exists only in the receptive mind of the beholder.

Such drugs are called placebos. The term is an unaltered acquisition from the Latin, which precisely describes their function. It is the first-person singular of the future indicative of the verb "*placere*," and means "I shall please." Nevertheless, despite its classic aptness, the word comes to medicine not from Latin but from English. "Placebo" has been an English idiom of varied meaning for nearly a thousand years. It entered the English language as an ecclesiastical colloquialism for vespers for the dead (from the Vulgate psalm recited in that service, which begins, "*Placebo Domino in regione vivorum*") around the twelfth century. Toward the end of the fourteenth century, while retaining (as it still does) its ecclesiastical meaning, it began to acquire a secular connotation. It was first so used, to judge from an allusion in "The Canterbury Tales" (Flatereres been the deueles Chapelleyns that syngen euere Placebo"), as a metaphor suggesting supine sycophancy. By the middle of the fifteenth century, "placebo" was in general use as a simple synonym for "flattery" and "flatterer," and it continued to serve that purpose through the sixteenth and seventeenth centuries. It then came to mean a courtesy designed to soothe or gratify. Its inclusion in the vocabulary of medicine is rather more recent. It made its first clearly recorded appearance there (as "an epithet given to any medicine adapted more to please than benefit the patient") in the 1811 edition of Hooper's Medical Dictionary. It could hardly have been included much earlier. For until around the early part of the nineteenth century, when chemistry began to develop into a science capable of discerning the true nature and action of drugs, all medicines, as far as anyone could tell, were equally worthy or worthless.

The definition of a placebo has broadened since Hooper's time. His epithet is no longer confined to drugs that are prescribed solely to satisfy the patient's craving for medicine. It now embraces any form of therapy that is inappropriate to the complaint under treatment. All medical procedures may thus on occasion be placebos. (So, for that matter, may almost anything—a religious medal, a toilet ritual, the avoidance of drafts, a gold ring applied to a sty). Most placebos, however, are drugs. They include true drugs, purported drugs, and deliberate counterfeits. A true drug becomes a

placebo when its specific therapeutic properties are misapplied. The use of penicillin in the treatment of the common cold, the administration of cortisone to victims of osteoarthritis, and the casual prescription of tranquillizers, stimulants, and vitamins, though currently much in fashion, are among the many examples of true drugs so abused. The purported drugs are mainly patent medicines—blood refreshers, backache nostrums, acne cures, nerve tonics, virility restorers. Although most patent medicines contain some active chemical agent (alcohol, aspirin, caffeine), it is seldom one that has an active bearing on the need. A counterfeit drug is a pure placebo. It looks like a drug and tastes like a drug. It may even, if administered by injection, feel like a drug. But it is pharmacologically a drone. It is made of some inactive substance (starch, lactose, or salt), and so has no inherent power either to help or to harm. And yet, for all their great variety, all placebos—drugs or devices or charms—are essentially alike. The power they exert is not their own. It derives from the infinite capacity of the human mind for self-deception.

The pure placebo, it need hardly be said, is the only placebo that has a reputable place in modern medical science. But its place is a curious one. Contrary to common supposition, the placebo is no more than peripherally accepted in general clinical medicine. Many physicians, in fact, are magisterially opposed to any therapeutic use of placebos, considering it little better than quackery, and even those who condone the practice do so with many reservations. "A placebo should never be given on demand," Arthur K. Shapiro, professor of psychiatry and neurology at the New York University College of Medicine, points out in a recent study in the *Journal of Nervous and Mental Disease*. "It should never be continued for a long time, at least without regular reëxamination . . . or given unless the indications are more carefully examined than if a specific therapy were ordered. A placebo should never be given if the diagnosis is in doubt, if the doctor-patient relationship is in jeopardy, for retaining the confidence of those expecting but not requiring treatment, and unless the doctor believes it will help. A placebo should not be prescribed for neurotic patients whose complaints are based on anxiety and fear of disease. It should never, in any circumstances, be used as a substitute for psychotherapy . . . ." The circumstances in which a placebo may be given are equally well defined. "A placebo," A. Barham Carter, a staff physician at the Ashford Hospital, in London, has noted in a report to the *Lancet*, "may be the correct treatment for a patient who needs a material sign that we are trying to help him, and who (from a scientific point of view, at any rate) is past our help." The

niche that the placebo chiefly occupies is in pharmacological research. Its usefulness there is undisputed. As a control in the clinical evaluation of drugs—screening out false or feeble claimants, verifying the true—it has, and can have, no substitute. And with every exposure of a sham or shallow drug, it has added to the formidable documentation of its own peculiar powers.

The controlled evaluation of drugs, though ordinarily identified with twentieth-century medicine, is not a twentieth-century innovation. Twentieth-century medicine has merely refined the procedure to a nearly flawless level of efficiency. The use of controls in an experimental chemotherapeutic design goes back to the middle of the eighteenth century. It was introduced by the celebrated Scottish clinician James Lind in the course of studies he described in his epochal "A Treatise on the Scurvy," in 1754. Lind at that time was serving as a surgeon on the British man-of-war H.M.S. Salisbury. Numerous ship-board outbreaks of scurvy (then a gruesome commonplace of seafaring) had aroused his interest in the disease and led him to explore the existing literature on the subject of its cure. One apparent cure immediately caught his fancy. This supposed remedy, which had been in occasional European fashion for several hundred years, was citrus fruit—the "juyce of lemmons" and oranges. Lind precociously refused, however, to mistake his fancy for fact. Instead, he conceived the novel notion of

submitting it to a comparative clinical test. That was in the fall of 1746, and when the usual winter scurvy outbreak swept the Salisbury, he coolly went to work. He chose for his experiment twelve ailing sailors as alike as possible in physique and severity of symptoms, and divided them into six groups. Five of these two-man teams he arbitrarily (and privately) designated as controls, and for each he prescribed a different but equally innocuous remedy—cider (one quart daily per man), an elixir of diluted sulphuric acid (twenty-five drops three times a day), vinegar (one pint daily), sea water (one pint daily), and a pill composed of garlic, radish, and mustard seed (to be taken once a day). To the men in the sixth group he gave a daily ration of two oranges and a lemon each. All hands were otherwise treated alike. They received the same food and drink and the same general nursing care. The experiment lasted a week. At the end of that time, one member of the sixth (or citrus) group was sufficiently recovered to return to regular duty, and his companion was up and about. All the controls were as miserably sick as ever.

Lind's confirmation of his ascorbutic hunch (which presently resulted in a citrus supplement to the Royal Navy rations, and the sobriquet of "Limeys" for British seamen) was accepted as a model means of testing drugs for around a hundred and fifty years. It was not until the early twentieth century that its faults became apparent. Their existence came to light with the gradual realization that the pharmacological potency of the drug employed is not the only element involved in a drug evaluation. There are two other potent factors that must be taken into account. One of them is the patient's susceptibility to suggestion. "It is not enough merely to administer a therapy and then assess the nature and extent of change in the patients treated," Milton Greenblatt and a group of his associates at the Massachusetts Mental Health Center, in Boston, have noted in the *Journal of Chronic Diseases*. "Of the many hazards in this procedure, perhaps the greatest is the placebo effect. The patient may show definite improvement following treatment even when the drug is a placebo—when it has no specific disease-combatting efficacy. Symptomatic improvement may be induced psychogenically if the patient attributes healing powers . . . to the drug, the therapist, or the institutional setting." The other factor is the clinician's susceptibility to bias. The "innate enthusiasm" with which every investigator approaches a research project, Werner Tuteur, clinical director of the Elgin State Hospital, in Illinois, has observed in a report to the *American Journal of Psychiatry*, necessarily affects his interpretation of it. The elimination of these subjective pitfalls has greatly modified the procedure that

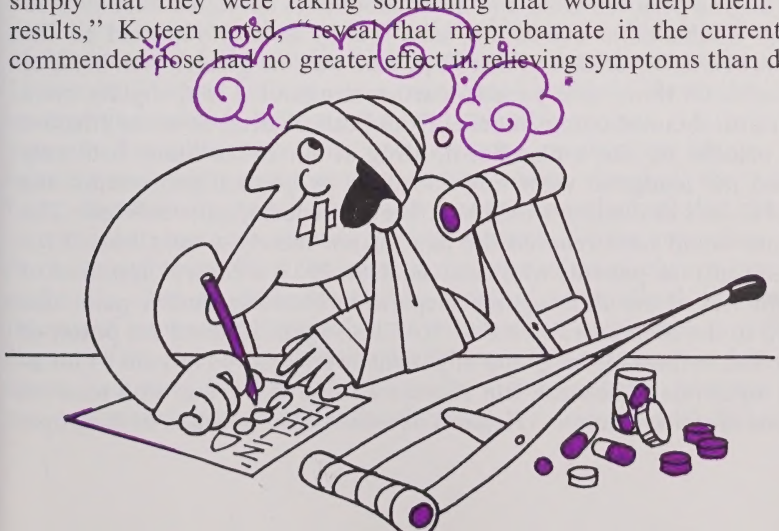
Lind contrived. Only his principle of objective comparison remains intact. This is, however, the basic rationale of modern clinical pharmacology. The basic tool in the modern technique is, of course, the pure placebo. Its use as the instrument of control makes possible the total secrecy essential to a totally objective appraisal. Two simple safeguards assure this result. Unlike the obvious banalities that Lind employed, the modern test placebo is custom-made to deceive. It perfectly simulates in appearance and taste the drug under investigation. As a further precaution, the clinician in charge of the test receives the drug and the placebo in containers labelled in a code whose key is withheld from him until the conclusion of the trial. The clinician's report can thus be taken as an unemotional record of the patient's unguided response. It is a product of the intellect alone.

The "double-blind" control experiment, as this research design is called, was constructed (on a foundation roughly laid by the British experimental psychologist W. H. R. Rivers in 1906) by three Cornell University Medical College clinical pharmacologists—Harry Gold, Nathaniel T. Kwit, and Harold Otto—in the early nineteen-thirties. They introduced their procedure (through an illustrative report to the *Journal of the American Medical Association* on anginal analgesics) in 1937; its excellence was presently confirmed by other investigators; and it has been established as the standard evaluative technique since shortly after the Second World War. A salutary diminution in the once torrential flood of drugs with entirely ephemeral powers has perhaps been its most conspicuous result. (Half a century ago, Sir William Osler was inspired to utter the disenchanted admonition "One should treat as many patients as possible with a new drug while it still has the power to heal.") It has, however, accomplished more than that. It has also served to illuminate this phenomenon of ephemerality. "Periodically it is observed that the introduction of a new drug is followed by a cluster of favorable reports of its therapeutic value," Stewart Wolf, head of the Department of Medicine of the University of Oklahoma School of Medicine, has noted. "Later it is often discovered (but not always published) that the agent has no appreciable specific therapeutic action. Then, as the agent has fallen into disuse, many have assumed that the authors of the favorable reports were either deluded or at least not sufficiently critical of their results. Actually, the favorable reports may have contained strong statistical evidence that the desired physiological change had been achieved. There is little reason to doubt that the results were real enough. The neglected possibility that may explain the later failure of the agent is that the good results were attributable not to the

pharmacological properties of the agent but to the very real and often powerful placebo effect."

That the placebo effect exists is clear beyond dispute. It owes nothing to the imagination but its origin. Its reality has been abundantly demonstrated by the many double-blind control experiments whose results are now on record. So, almost as abundantly, has its range. The palliative powers with which suggestion can invest the placebo are extraordinarily broad. Their reach surpasses that of the powers inherent in the great majority of genuinely robust drugs. It extends (at least potentially) throughout the spectrum of psychophysiological distress.

The placebo can powerfully mimic the tranquillizing touch of certain ataractics. "There is no good evidence that meprobamate [the chemical name of Equanil and Miltown] can be distinguished from a placebo in treating anxiety in psychiatric outpatients," two clinical pharmacologists at the Johns Hopkins University School of Medicine—Victor G. Laties and Bernard Weiss—reported to the *Journal of Chronic Diseases* in a recent review of the subject. Their conclusion was largely derived from two well-controlled studies carried out in 1957. One of these, the work of Herbert Koteen, assistant professor of internal medicine at Cornell University Medical College, involved twenty-five patients, whose symptoms included anxiety, muscle tension, restlessness, and irritability. In the course of this trial, each patient consumed thirty-seven bottles of meprobamate capsules and thirty-six bottles of matching lactose placebo capsules. All were told simply that they were taking something that would help them. "The results," Koteen noted, "reveal that meprobamate in the currently recommended dose had no greater effect in relieving symptoms than did the



placebo." If anything, the placebo was the more effective. An analysis of reports on the patients showed that twenty-three of the thirty-six bottles of placebo capsules produced marked improvement. For meprobamate the count was twenty-one out of thirty-seven. A team of English investigators—M. J. Raymond, C. J. Lucas, M. L. Beesley, B. A. O'Connell, and S. A. F. Roberts—conducted the other study reviewed by Laties and Weiss. Fifty-one psychoneurotic patients took part in the test, and each was given five different ataractic drugs and a placebo. In addition to meprobamate, the drugs were amobarbital (Amytal), chlorpromazine (Thorazine), benactyzine, and a preparation containing, among other things, Rauwolfia. Thirty-three patients responded favorably to amobarbital, twenty-five to meprobamate, twenty-five to the Rauwolfia preparation, nineteen to chlorpromazine, and eighteen to benactyzine. But twenty-two patients responded just as favorably to the placebo.

Physical pain, as well as mental anguish, is amenable to placebo therapy. Its susceptibility has been established by numerous double-blind investigations, including, as it happens, the first. In their introductory study of 1937, Harry Gold and his associates compared the effectiveness of two conventional analgesics (theobromine and aminophylline) with that of a placebo in the treatment of cardiac pain. They found "no appreciable difference." In 1950, a similar study, undertaken by a team that again included Gold, produced exactly the same result. Khellinine, a drug derived from bishop's-weed, had earlier been informally described in the pages of the *American Heart Journal* as a superior means of relieving the pain of angina pectoris. Gold and his collaborators subjected khellinine to a formal double-blind evaluation, and found, as they reported to the *American Journal of Medicine*, that its powers were no greater than those of the placebo. Of thirty-nine patients participating in the test, slightly more than a third obtained complete relief from both. A drug no more effective than a placebo is, like a placebo, no drug at all. If khellinine had truly possessed the analgesic vigor envisioned by its original proponents, the result of Gold's evaluation would have been, of course, quite different. The khellinine would have relieved the pain of not merely a third but all (or practically all) the patients who received it. In 1953, a control appraisal of the usefulness of the anticoagulant heparin in blocking cardiac pain, also reported to the *American Journal of Medicine*, again affirmed the power of the placebo. A third of one group of patients were relieved of pain by intravenous injections of heparin. But so were a third of a group who received injections of saline solution. (Heparin has since been returned to its proper

function as a specific anticoagulant.) And so—according to a report published in the *Annals of the New York Academy of Science* in 1949—were five of nineteen cardiac patients who were maintained for several weeks on lactose tablets alone.

The pain of coronary-artery disease is not the only pain over which the placebo has a certain sovereignty. It can also blunt the agonizing pain that often follows major surgery. "In [thirteen] studies of severe, steady postoperative wound pain," Henry K. Beecher, professor of anesthesiology at Harvard University Medical School, notes in a recent report to the *Journal of the American Medical Association*, "we have found that rather constantly thirty per cent or more of these individuals get satisfactory pain relief from a placebo." ("Satisfactory relief" is defined by Beecher as "fifty per cent or more relief of pain at two checked intervals—forty-five and ninety minutes after administration of the agent.") A total of four hundred and fifty-three men and women, all patients at Massachusetts General Hospital, participated in these tests. The number of patients who obtained relief ranged from a low of fifteen per cent in one study to a high of fifty-three per cent in another. Moreover, Beecher adds, the studies produced "strong evidence that placebos are far more effective in relieving early postoperative wound pain when [the pain] is severe than when it is less so." The impact of the placebo on clinical headache, according to a classic study conducted by E. M. Jellinek, professor of biometrics at the Yale School of Medicine, in 1946, is even more emphatic. In this study, a hundred and ninety-nine general-hospital patients were regularly given a lactose placebo upon complaint of headache. Approximately sixty per cent of the patients reported prompt relief. Stewart Wolf, of the University of Oklahoma School of Medicine, and Harold G. Wolff, professor of medicine at the Cornell University Medical College—in a monograph entitled "Headaches"—cite an arresting instance of how promptly a placebo may act. "A forty-three-year-old businesswoman, who had dedicated much of her life to a domineering and often disapproving mother whom she said she 'adored,' began to realize as she talked [in a psychiatric consultation] that she really resented her mother's tyranny," they recount. "Pulse recordings made from the right superficial temporal artery were of relatively low amplitude at first . . . but as she [continued to speak of her mother], the recorded tracing of a cranial artery pulsation increased in amplitude. A pounding began on the right side of her head. Within a few minutes, she had a full-blown [migraine] headache. At the height of her headache, [she was given] a hypodermic injection of dilute salt water . . . . She was told that it was a

powerful drug which could constrict her arteries and remove the pain." It did. "Almost immediately," the report goes on, "the headache began to subside and within a few minutes was gone entirely. At the same time the recorded artery pulsation [demonstrably] reduced in amplitude." Another pain syndrome that readily responds to placebo therapy is that of rheumatoid arthritis. "The number of rheumatic patients found to benefit from placebos is about the same as the number favorably influenced by salicylates [aspirin and related salicylic-acid compounds] or even cortisone," E. F. Traut and E. W. Passarelli, investigators at the arthritis clinic of the Cook County Hospital, in Chicago, recently reported to the *Annals of the Rheumatic Diseases*. "Eighty-eight patients were studied in detail. Lactose placebo tablets [taken after each meal] benefited one half of all patients—twelve per cent of them for longer than six months. Placebo tablets benefited most of the patients with the severer grades of arthritis. Placebo injections benefited sixty-four per cent of thirty-nine patients resistant to placebo tablets." In addition to relief of pain and "stiffness," the benefits included improvement in sleeping, eating, bowel action, and general well-being. A reduction in swelling was also noted among most of the responsive patients. This, the authors pointed out, was—like the artery constriction observed by Wolf and Wolff—a "purely objective improvement."

Other investigators have reported equally pure objective reactions to placebos in other ailments. One of these is motion sickness. In an experiment described in the *Bulletin* of the Johns Hopkins Hospital in 1949, two Johns Hopkins clinicians—L. N. Gay and P. E. Carliner—induced motion sickness in a panel of thirty-three volunteers. When the patients were properly prostrated, each was given a lactose placebo. Within thirty minutes, more than half of them (approximately fifty-eight per cent) were visibly recovered. They had ceased to vomit, they were no longer cold and clammy, and the ghastly pallor characteristic of such seizures had been replaced by normal color. Gastric hyperacidity, according to a study reported by Stewart Wolf and a group of associates to *Gastroenterology* in 1952, is another condition that manifestly yields to placebo therapy. The study was done on a patient with a gastric fistula (an opening into the stomach through the abdominal wall), and consisted of thirteen trials. On eight occasions, the observers noted, the administration of a placebo produced a measurable decrease in the gastric acid level. Two independent studies—one by B. R. Hillis, assistant in the Department of Materia Medica and Therapeutics at the University of Glasgow, and the other by J. S. Gravenstein, resident physician at the Massachusetts General Hospital, and a

group of associates—have demonstrated the power of the placebo to suppress cough. Hillis, whose study was published in the *Lancet* in 1952, induced coughing fits in six volunteers. Four of them were quickly relieved by a subcutaneous injection of saline solution. The Gravenstein study—reported to the *Journal of Applied Physiology* in 1954—involved forty-eight patients with clinical cough. A lactose placebo was effective in eighteen members (or about forty per cent) of the group. The placebo can also conspicuously cure the common cold. Or so Harold S. Diehl, dean of medical sciences at the University of Minnesota, reported to the *Journal of the American Medical Association* in 1933. Thirty-five of a hundred student victims of acute attacks whom he treated with lactose tablets were promptly freed of their sniffles, fever, and malaise.

Nor are these several soothing services the only measure of the placebo's wide-ranging power. They merely manifest one aspect of it. It has, no less emphatically, another, and harsher, side. Toxic placebo effects as real as those produced by any genuine drug have been recorded by many investigators in the field. As a rule, like most other drug-induced dishevelments, these effects are relatively mild. In one of the numerous studies undertaken by Beecher and his associates at Harvard, thirty-six of seventy-two participating patients were made drowsy by a lactose tablet. Seven actually fell asleep. Of ninety-two patients in another Beecher study, twenty-three developed headache following the administration of a placebo. Fourteen others complained of mental confusion. Nine were nauseated. Nausea, together with faintness and diarrhea, was also reported, after treatment, by

seven of the hundred Minnesota students in Diehl's common-cold experiment. Serious reactions are not, however, unknown. Three of thirty-one patients in a test conducted by Stewart Wolf became violently ill. "One of the three," he recounts, "had sudden overwhelming weakness, palpitation, and nausea within fifteen minutes of taking her tablets. In a second patient, a diffuse, itchy, erythematous maculopapular rash developed after ten days of taking [placebo] pills. A skin consultant considered the eruption to be a typical dermatitis medicamentosa [or drug-induced reaction]. After use of the pills was stopped, the eruption quickly cleared. In a third patient, within ten minutes of taking her pills, epigastric pain developed, followed by a watery diarrhea, urticaria [hives], and angioneurotic edema of the lips." In an evaluation of streptomycin as an adjunct to chest surgery, made by William B. Tucker, director of the tuberculosis service of the Veterans Administration Central Office, in Washington, two-thirds of a group of patients who received only placebos developed every sign (including blood-cell changes and hearing loss) of streptomycin toxicity. And Arthur Shapiro, whose strictures against the indiscriminate use of placebos have already been mentioned, has reported a case in which a lactose placebo brought about a shattering impairment of liver function.

Although the placebo is rightly reckoned an agent of infinite range, the powers it manifests are less than absolute. In contrast to the results obtained by a genuine drug, its potential reach exceeds its predictable grasp. The effectiveness of the placebo is almost chaotically variable. It is determined by the interplay of several multifaceted forces. Environment has an important bearing on the result. A placebo administered in a hospital, where the patient lies surrounded by symbols of authority and care, is more likely to have an effect than one taken by someone alone at home. Another factor is the amount of stress engendered by the complaint. Placebos are "most effective when the stress (anxiety or pain, for example) is greatest," Beecher has postulated. There is no ready explanation of this phenomenon. One possibility is that the ability to respond to suggestion increases with the urgency of the desire for relief—for, as Beecher, among others, has also observed, the power of the placebo tends to slacken with use and diminishing need. On the other hand, it may simply be that exquisite stress, in the form of fear or foreboding, is itself a product of suggestion, and hence is exquisitely amenable to counter-suggestion. A third, and crucial, factor involved in the placebo effect is the nature of the patient. "There are personality characteristics and habits of mind which predispose a person to respond to a placebo," Louis Lasagna, professor of clinical pharmacology

and medicine at the Johns Hopkins University School of Medicine, has noted. "The psychological predisposition to respond is probably present in varying degrees in all of us. But some persons are very likely to respond positively in a wide variety of situations. Others will almost never respond, whatever the situation." In Lasagna's opinion, which is shared by most investigators in the field, the traits that distinguish the former group have a strong neurotic cast. The people most receptive to the magnetic pull of faith tend to be "emotionally expressive and to speak freely, most frequently of themselves and their problems." They exhibit "somatic symptoms (nervous stomach, diarrhea, headache) during periods of stress," and are habitual consumers of cathartics and aspirin. They are "anxious, self-centered, and emotionally labile." Few of them are college graduates, and most are regular churchgoers. Such factors as sex and age appear to be irrelevant. So does intelligence. The trait that chiefly distinguishes those who seldom respond to the placebo is emotional stability. That and sophistication.

Just how the placebo achieves its effects has not yet been determined. Some twenty years of intensive research have established little more than the vigor, the variety, and the limitations of the phenomenon. The nature of the neural alchemy that enables the credulous mind to transmute illusion into reality remains very largely obscure. Its significance, however, seems clear enough. It indicates that medicine, despite a century of scientific progress, is still an art as well as a science. It also suggests the composition of the many therapeutic triumphs of other, less rational approaches to the treatment of disease.

BUMS, ON WAKING

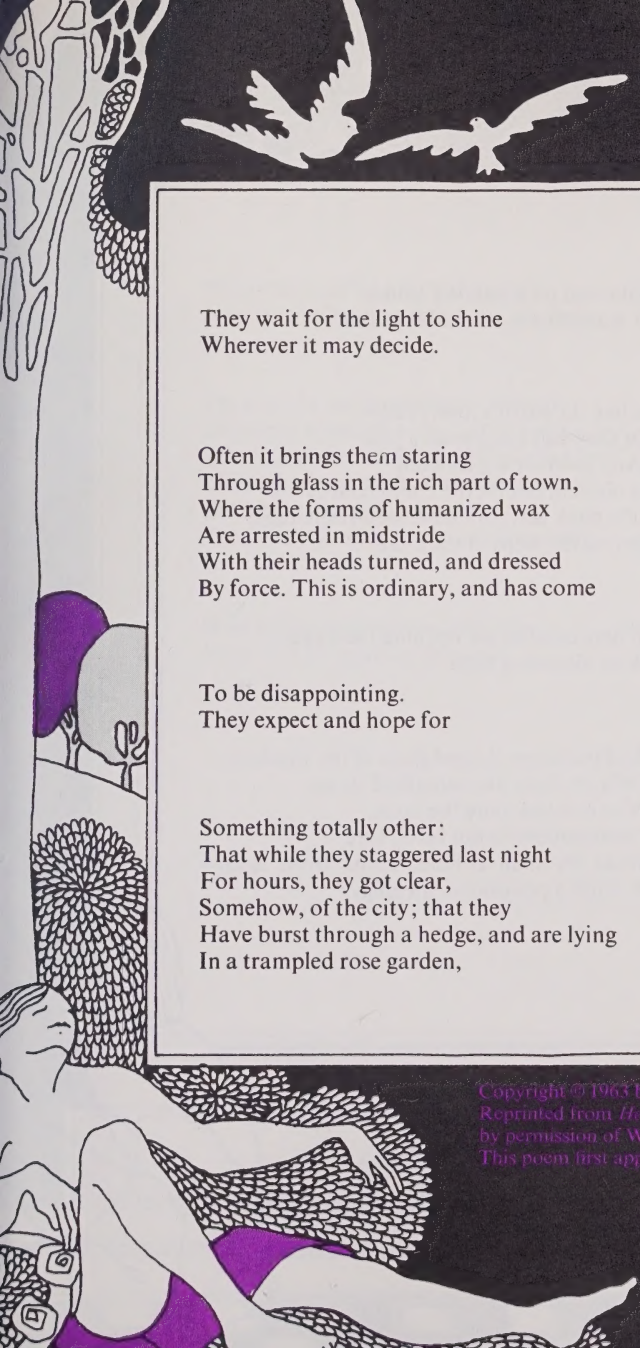
Bums, on waking,
Do not always find themselves
In gutters with water running over their legs
And the pillow of the curbstone
Turning hard as sleep drains from it.
Mostly, they do not know

But hope for where they shall come to.
The opening of the eye is precious,

And the shape of the body also,
Lying as it has fallen,
Disdainfully crumpling earthward
Out of alcohol.
Drunken under their eyelids
Like children sleeping toward Christmas,

by James Dickey

ILLUSTRATED BY HEATHER COOPER



They wait for the light to shine
Wherever it may decide.

Often it brings them staring
Through glass in the rich part of town,
Where the forms of humanized wax
Are arrested in midstride
With their heads turned, and dressed
By force. This is ordinary, and has come

To be disappointing.
They expect and hope for

Something totally other:
That while they staggered last night
For hours, they got clear,
Somehow, of the city; that they
Have burst through a hedge, and are lying
In a trampled rose garden,

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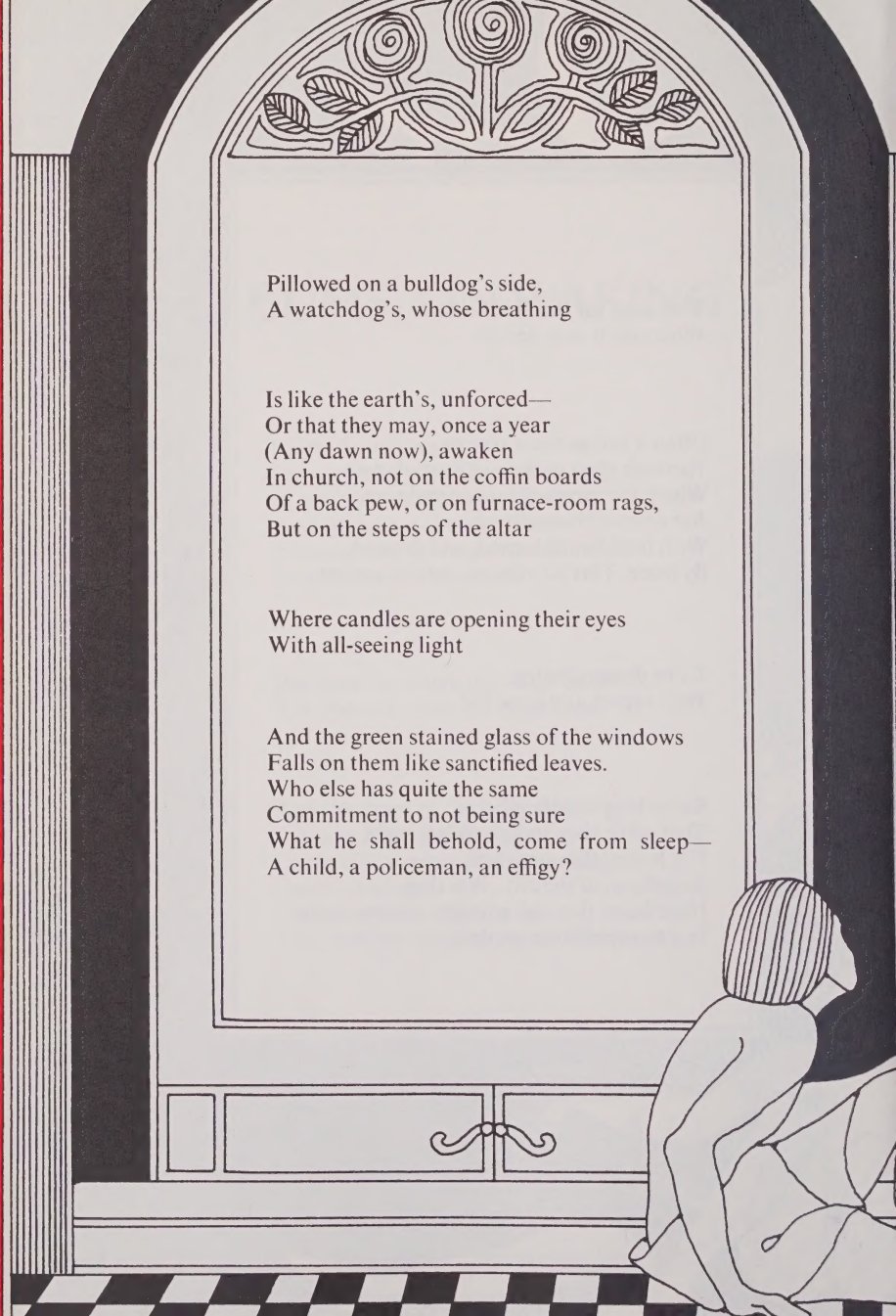


Pillowed on a bulldog's side,
A watchdog's, whose breathing

Is like the earth's, unforced—
Or that they may, once a year
(Any dawn now), awaken
In church, not on the coffin boards
Of a back pew, or on furnace-room rags,
But on the steps of the altar

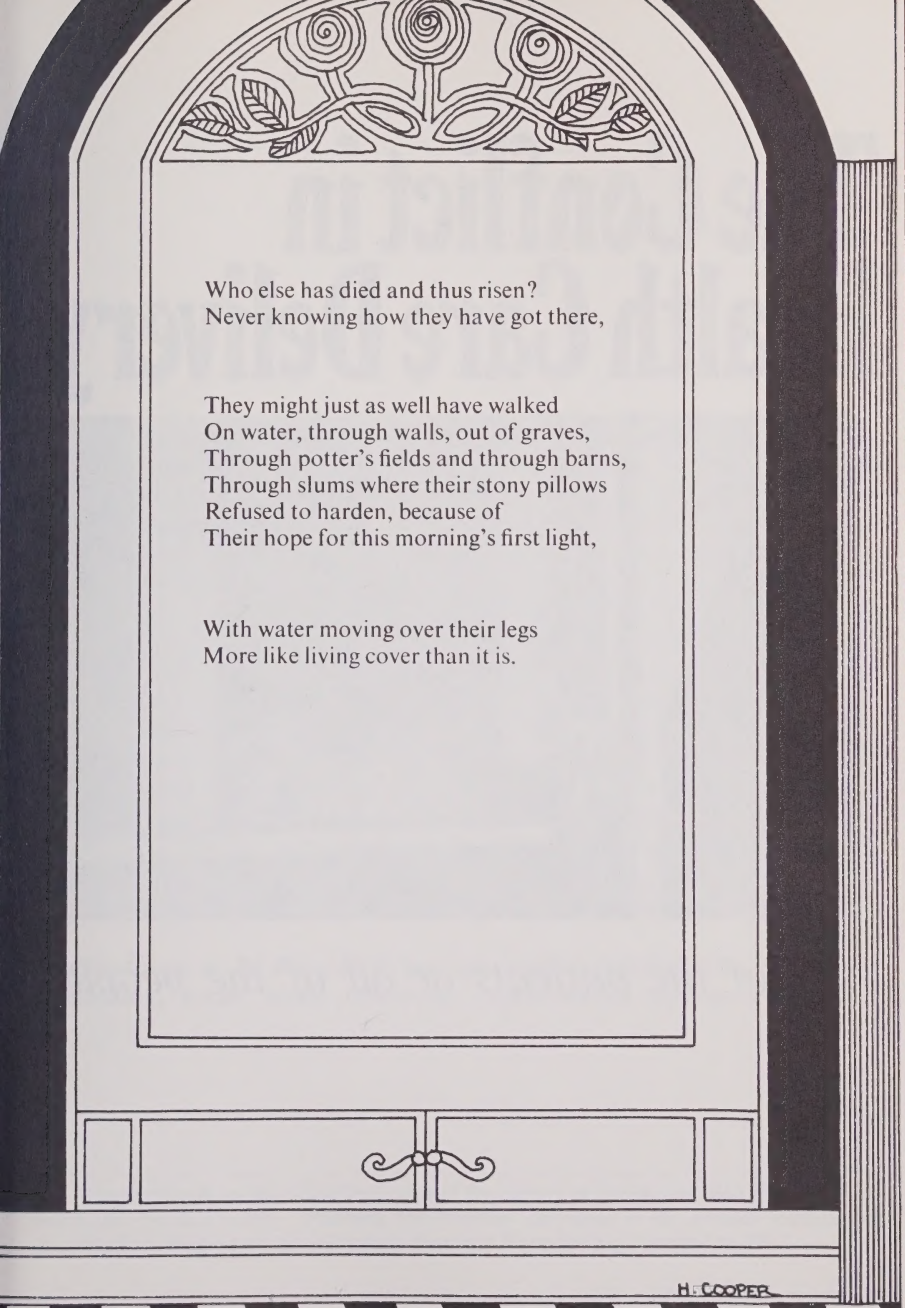
Where candles are opening their eyes
With all-seeing light

And the green stained glass of the windows
Falls on them like sanctified leaves.
Who else has quite the same
Commitment to not being sure
What he shall behold, come from sleep—
A child, a policeman, an effigy?

Who else has died and thus risen?
Never knowing how they have got there,

They might just as well have walked
On water, through walls, out of graves,
Through potter's fields and through barns,
Through slums where their stony pillows
Refused to harden, because of
Their hope for this morning's first light,

With water moving over their legs
More like living cover than it is.



The Conflict in Health Care Delivery

—all of the patients or all of the people?

by Alexander Macpherson

There exists in health care today the conflict between what is best for the individual and what is best for society; the dilemma of who should be treated and who should make treatment decisions. My purpose here is to discuss the social and political issues confronting health-care professionals today, as well as to examine the elements necessary in providing them with an effective decision-making structure.

One example of a health-care organization facing problems in health planning is the Addiction Research Foundation of Ontario. The Foundation's goals are to enable the people of Ontario to: (a) achieve the best possible solutions to the issues raised by the use of psychoactive substances; (b) reduce the number of persons who use alcohol or any other drug in harmful ways; and (c) help *all those* adversely affected by alcohol or any other psychoactive substance. These goals clearly spell out the Foundation's responsibility—to insure that treatment is available to all persons who use alcohol or any other drug in a harmful way. It's that "all" that creates the problems.

Clearly, resources do not exist to provide physical examinations, individual counselling, social work follow-up, psychological testing, vocational

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Dr. Macpherson is an Associate Professor of Psychiatry at McMaster Medical Centre in Hamilton. From a speech "Planning for Progress" delivered to the Annual Meeting of the Hamilton Region of the Addiction Research Foundation, January 29, 1972.

counselling, and all the other components that go into a total "push" program for treating the alcoholic. Decisions must be made and priorities set. In the field of alcoholism, this tends to be done by the patient himself. Fortunately for treatment agencies, there is a high degree of non-compliance with regimens laid down by the health professionals and, in general, those alcoholics who will co-operate are treated. Does this, however, execute the mandate? I think not. Clearly, this direction to provide help for all involves the necessity of reaching those who are not being reached by current treatment methods. However, providing treatment for this group may prove more expensive and time consuming, and may diminish what can be done for those who can and are able to co-operate.

Here, then, is the problem facing the total health care system: the requirement for universality—the principle of comprehensiveness combined with the necessity of providing this service within a finite budget.

Given these elements, the health-care administrator must be concerned with the distribution of services and the setting of priorities. It is his objective to provide as good a service as possible to as many people as possible. On the other hand, if we look at the provider of health care, we see a different picture. The health-care professional, whether he is on salary or on a fee-for-service basis, sees his prime responsibility not to society as a whole but to his patient. This is a laudable point of view, particularly if you happen to be the patient. Furthermore he generally operates independently of other health costs. He has no financial responsibility for treatment decisions he makes about his patient; he receives no direct benefit from decreasing his patient's length of stay in hospital or from minimizing laboratory investigation; and until recently there certainly has been little pressure on him to modify his services in keeping with rising health-care costs. He takes the highly defensible position that his prime concern is for his patient, for the *individual* under his care. The health-care administrator takes perhaps an equally defensible position, that his concern is for all patients—for the population of a community rather than for the individual.

Not only does this dilemma apply to the question of who should be treated, it also applies to treatment decisions. Consider the situation daily facing psychiatrists. We know that profoundly-depressed patients have about one chance in six of dying from suicide in their lifetime as opposed to something like one chance in 5,000 for the general population. We also know that of patients presenting at hospital following a suicide attempt, approximately

1% will die from suicide within a year. If we consider the preservation of life as the main objective of the psychiatrist, it would make sense—in terms of protecting the individual—to hospitalize for long periods of time profoundly-depressed people and people who have attempted suicide. This is not current practice. The psychiatrist quite consciously decides that the collective good of releasing 99 patients into the community outweighs the individual bad resulting from one of these patients killing himself.

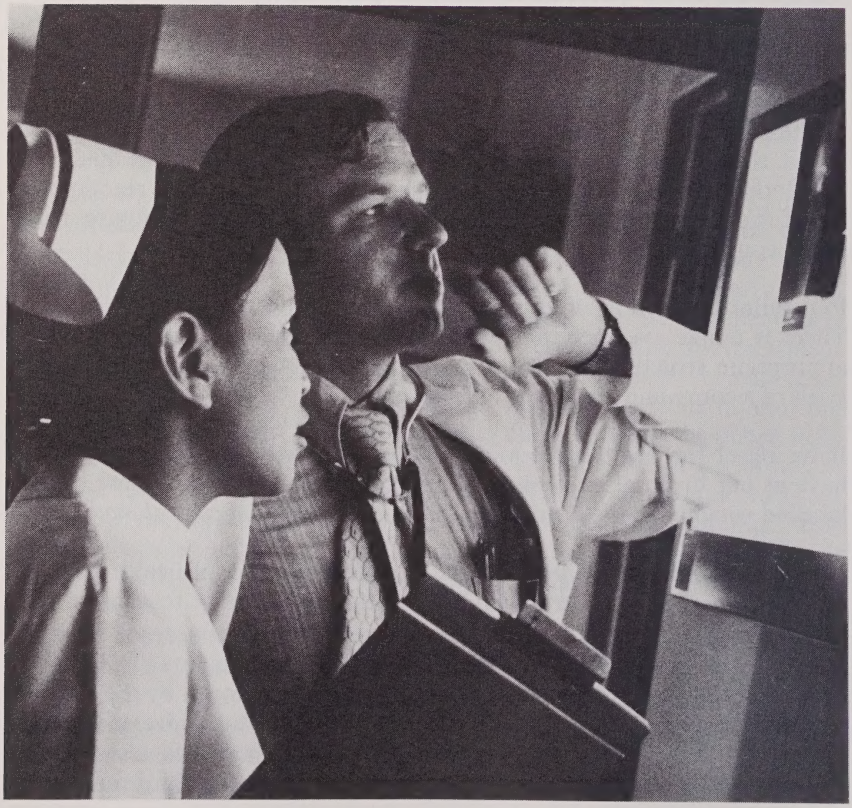
Can health professionals resolve this general dilemma, which is reflected daily in specific problems? I think not. We have only to look around to reject this point of view. The free enterprise system has not provided health care to remote communities, increased life expectancy, or decreased infant mortality to the extent one might have expected given the financial cost. It has also neglected the poor in large cities. Indeed, the English economist, Titmus, in an analysis of systems of collecting and distributing blood for transfusion has raised serious doubts as to the efficacy of a market economy in this area of health-care delivery, and by extension perhaps in all areas of health-care delivery. Titmus postulates that the greater the price paid for blood, the greater the incentive for the donor to misrepresent the quality of his blood and, therefore, the greater the likelihood of adverse reactions to transfusions. He proves his hypothesis to my satisfaction using figures from many countries of the world.

Past failure need not, of course, be a reflection on the present situation. There is ample evidence that physicians are socially aware. In my view, appropriate structures do not exist in our society to translate the health goals of a community into appropriate action.

If we reject the health professional in isolation as a decision maker, we have at our disposal two other models of decision making. These can be labelled roughly as the *centralizing model* and the *local control model.*

In a centralized model, decisions as to the distribution of health care are made by an elite of experts who, in general, will attempt to achieve uniformity over large numbers of people and be more concerned with efficiency than with individuals. Who are the elite technocrats? In Ontario, they would probably fall into two groups—those employed by the government and those employed by the universities. Since the universities these days are in fact funded by government, perhaps these two technocratic systems are not as different as one might hope. There is a third force—the

"The health-care professional . . . takes the highly defensible position that his prime concern is for his patient, for the individual under his care."



"The health-care administrator takes perhaps an equally defensible position, that his concern is for all patients—for the population of a community rather than for the individual."

private granting foundations who fund researchers (usually, but not necessarily) within universities and independent of government. In Ontario, we are fortunate in having a new body of this sort—the Ontario Medical Foundation—that I understand will be attempting research in health care independent of government, but in close association with the medical profession. Under this model an elite in government administration requests advice on medical problems and implements policy on this basis. Few people are involved and the ordinary citizen lacking information and access to the corridors of power cannot participate in the process except after four or five years through his vote.

Under the decentralized process (the local control model) health care is controlled by the people. Who the people are is not too clearly defined. In general, they are a group of between 15,000-75,000 people with a common geographic base and common interests. Although the population base is substantially smaller, this is part of the model being proposed for some community clinics. One problem with the decentralized approach to decision making is lack of information. A union-run mental health clinic in the U.S. closed its doors when the Board insisted that the psychiatrists use nicotinic acid (a vitamin preparation) in the treatment of schizophrenia. The physicians, believing this to be an ineffective treatment, decided they could not operate under such conditions and left. The democratic process, too, is unduly sensitive to what might be called symbolic influence. By symbolic influence, I mean the situation where a single case becomes a cause celebre resulting in decisions not necessarily aligned with overall goals. For example, an alcoholic dying in a jail cell may result in the establishment of detoxication centres which absorb so much professional time and money that an industrial prevention program, which may be much more effective in reducing the overall number of alcoholics, has to be cut back.

This, then, is the problem. *There exists in health care today a conflict between what is best for an individual and what is best for society.* This conflict cannot be resolved in a general way, but must be approached as each situation presents itself. Health professionals cannot provide the answers. Bureaucrats and technocrats cannot provide the answers. The democratic process, by itself, cannot provide the answers.

Let us therefore examine the necessary elements to provide an effective decision-making structure. First, health care today must be guided by the

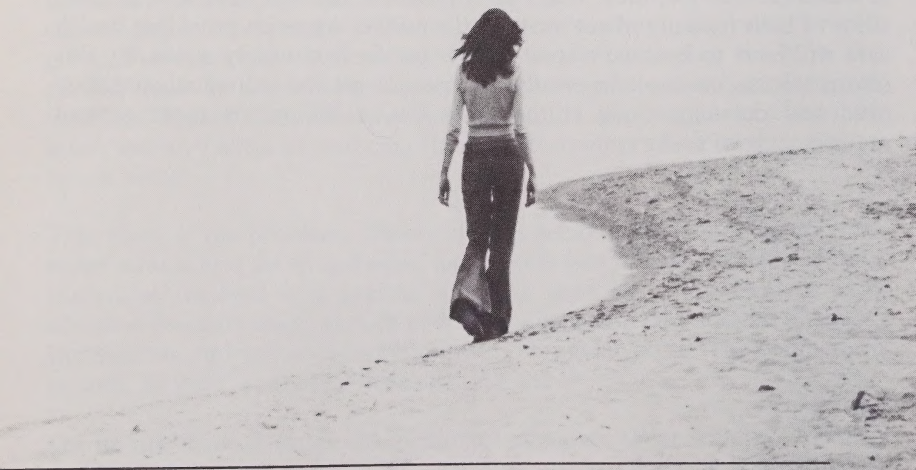
needs and, to some extent, the demands of the population. These are non-uniform—the needs in a large city differ substantially from those in a smaller community. Control of the health-care system must, therefore, be decentralized to as small political units as are feasible. Second, there must be adequate information input. In the past decade our evaluation techniques of health care have become increasingly sophisticated. A new breed of health researcher, the Clinical Epidemiologist, has come to the fore. We need a continuous monitoring of community health needs with rapid feedback from the information gatherers to the decision makers and providers. This has already been done in the model of communicable disease. Its feasibility and application in other areas of disease is only in its infancy. Third, all sectors must be represented in the decision-making body—the technocrat, the consumer, the politician, and (of course) the provider.

The Hamilton District Health Council is set up on just these lines. It plans for services for 500,000 people, a realistic number when considering specialty care, but far too large when it comes to primary care. Nevertheless, this community is leading the way in developing a decentralized model of health-care delivery. The Foundation, too, has a good track record. The strategy of decentralized branches and centres with local boards and lay advisory boards has paid dividends in relevance and responsiveness to community needs.

It seems clear to me, then, that health professionals will have to relinquish some of their traditional authority to the public. Agencies providing health care will have to become responsive to specific community needs. By this means we can continue to ensure that people get the individual care they need and demand, while at the same time fulfilling the more general requirements of society.

ALTERNATIVES TO DRUGS

by V. Alton Dohner



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–a new approach to drug education

Students of behavior have noted a common tendency in child rearing practices of the animal kingdom. The parents prevent undesirable behavior by diverting the attention of their young toward an acceptable activity. This provision of alternative behavior appears to have a positive effect upon

healthy development of the young. We humans need any help we can get to prevent drug abuse and can ill afford to ignore such excellent guidance.

Tactics for Drug Education

The ultimate goal of any drug education program should be the responsible use of potent, and potentially dangerous substances. A secondary goal is the prevention of drug abuse and drug dependency. An added bonus might be the alleviation of some existing alcoholism or other drug dependency. How can we accomplish these goals and achieve these social benefits?

One approach is to use the *scare technique*, stressing known effects and side-effects plus possible long and short-term effects. To be an effective approach the incidence of side-effects should be discussed in relation to the frequency and incidence of use. The approach must include accurate statistics and reproducible research results, not conjecture or quotes taken out of context. Two pitfalls to be avoided in presenting scare materials are the assumptions "Possibility equals Probability" and "Correlation equals Cause." The recitation of horrors or myths too often produces disrespect and incredibility. To avoid creating interest rather than disinterest the scare technique must be used judiciously.[1]

A second technique is the rational, matter-of-fact presentation of scientific fact with the admission that much of our knowledge is incomplete. These presentations should be many-sided with emphasis on giving objective evidence and providing a logical basis for decisions. Discussions should include personal and cultural preferences for certain drugs, plus the social, political, legal, and philosophical questions associated with use of various agents. Opposing points of view should be presented and examined with impartiality. Users, ex-users, and non-users can present and discuss their ideas about the various drugs before small groups.

A third technique is to discuss the styles of drug use and the motives

"The alternatives to drug abuse are also alternatives to the distresses and discomfort which lead to any self-destructive behavior."

involved in this use. Any discussion of motives must include the fact that these motives are similar for adults and youth. Emphasis must be given to the fact that the majority of drug users are not irresponsible, disaffected, alienated, or mentally ill. What should be stressed is that they are all attempting to alter the reality of their existence in one way or another.[2]

A final, infrequently advertised or utilized approach is offering non-chemical alternatives to drug use and drug abuse. In all the reams of materials concerning drug abuse in our society I have found only two articles and books whose titles stress alternative behavior. Alternatives are mentioned in a few other articles, however, without enough amplification.[3-7]

Realities

To offer alternatives to drug abuse requires accepting certain, perhaps unpleasant, realities.

Reality I: The use of mood-altering substances is usually pleasurable. People *use* drugs to "feel better" or to "get high." Individuals *experiment* with drugs out of curiosity or hope that the drugs can, in some way, make them feel better. People *abuse* drugs due to personal deficiencies.

Reality II: People start and continue to use (abuse) drugs because they want to do so, not because of some intrinsic nature of the drug.

Reality III: Drugs do not compel behavior. They may lessen inhibitions or interfere with logical thinking, thus allowing unusual behavior. However, drugs do not, of themselves, produce any actions by the person.

Reality IV: Psychological dependence results when the drug effect fills a need or is a people substitute. Any activity or agent which gives pleasure or relieves discomfort may be associated with psychological dependence.

Reality V: Drug users are not necessarily immature, immoral, irresponsible, socially disadvantaged, alienated, rebellious, or mentally ill. Drug use is a part of the continuum of human existence.

Reality VI: All use of illegal or socially disapproved drugs is not necessarily abusive, much less addictive. Some legal drug use is abusive because it produces physical, psychological, or social damage.

Reality VII: The important factor in many forms of pleasure seeking (gratification) behavior is the resultant change in the mood or consciousness of the person.

Reality VIII: Our society appears to stress experience as a prerequisite for maturity. Some drugs are alleged to give experience quickly, painlessly, and effortlessly.

Reality IX: Individuals do not stop using mood-altering substances or pleasure-seeking behavior until they discover something better.

Reality X: The alternatives to drug abuse are also alternatives to the distresses and discomfort which lead to any self-destructive behavior.

Requisites

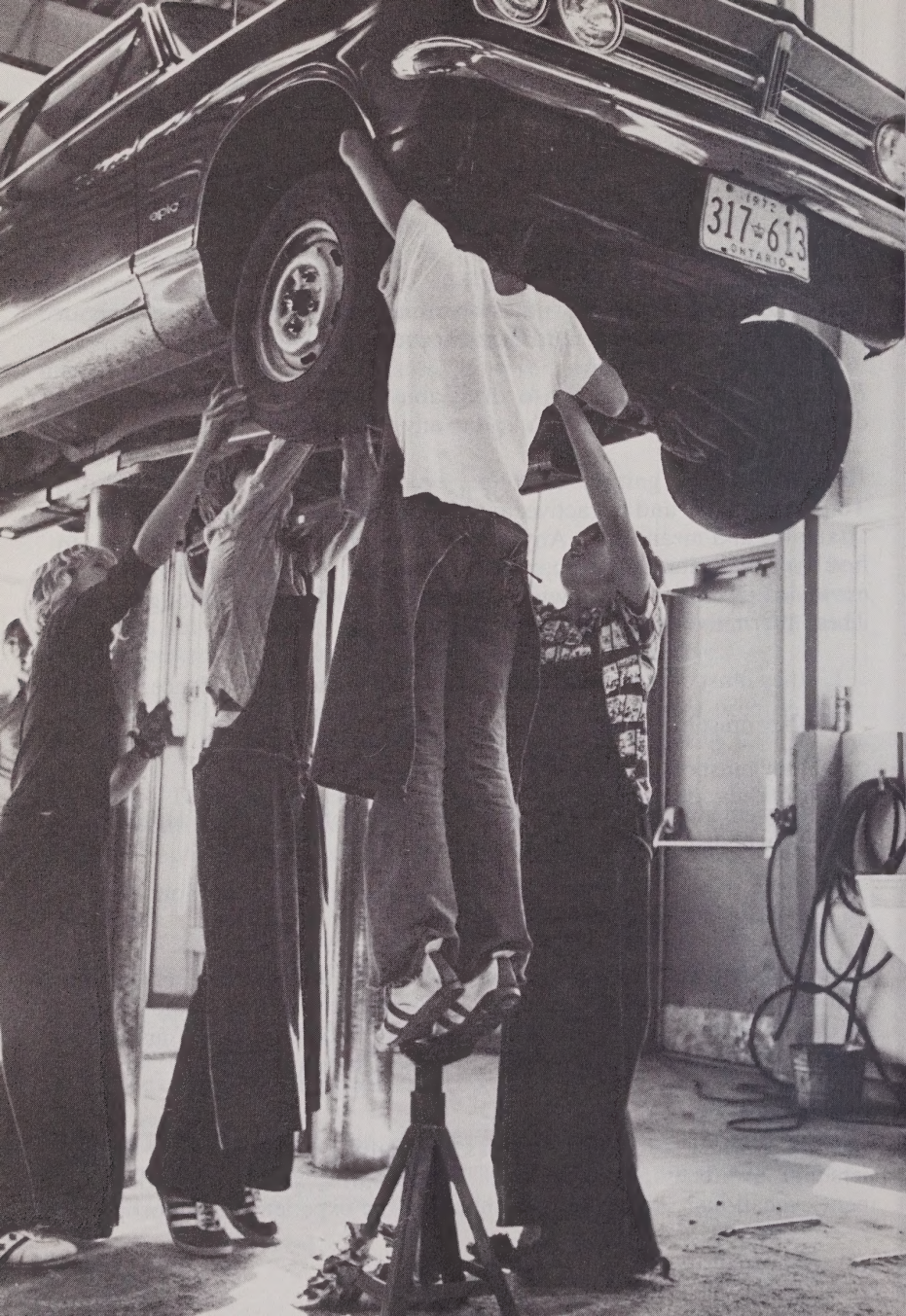
To be acceptable and attractive, any alternatives we offer must be realistic, attainable and meaningful. Any proposed alternative must assist people to find self-understanding, improved self-image, feeling of significance, expanded awareness, or new experiences which they seek through drugs. These alternatives must also meet other criteria:

1. they must contribute to individual identity and independence;
2. they must offer active participation and involvement;
3. they must offer a chance for commitment;
4. they must provide a feeling of identification with some larger body of experience;
5. some of the alternatives must be in the realm of the noncognitive and the intuitive.[3, 4]

Other alternatives may need to provide a way to transcend day to day routines such as job or education. The ultimate effect is, to quote Herbert Otto, to help the person "discover and make maximum use of his potentialities—the range of his strengths, capacities, and capabilities."[8]

Alternatives

The areas which can be offered as alternatives to drug abuse include personal awareness; interpersonal relationships; self-reliance development; vocational skills; creative and aesthetic experiences; philosophical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existential explorations, social, and political involvement; religious experiences; sexuality; and mind-trips.

Two other areas not included, although obviously needed, are meaningful work and meaningful pleasure. Work is too often mundane and stifling to the individual worker. To be meaningful, work must be employment which gives the individual some personal satisfaction: pride in his work, a sense of accomplishment or a sense of contribution. Too many mass-production jobs leave the worker without any of these intangible benefits. However, industry can change the attributes of the job as evidenced by efforts of the Bell System.[9] To do so involves emphasizing the quality of the job, providing effective praise and criticism, delegating more responsibility and providing a challenge.

Meaningful pleasure or relaxation is a "spin-off" of personal awareness development and recognition of one's inner resources. In a paper entitled "Idle Hands and Giddy Minds," Dr. A. R. Martin speaks of our insufficient use of one inner resource—our innate capacity for relaxation. We seem unable to learn to just be, "to open up freely to all stimuli from the inner and outer world, . . .; . . . to let body, mind and emotions have free play." Discussing the relaxing individual, Dr. Martin states: "Interested in the whatness rather than the whyness of things, he contemplates, reflects, marvels, wonders, and free associates." When we can relax in such a manner rather than feel compelled to "just do something" we will have meaningful pleasure.[10]

Personal Awareness. There are three aspects of personal awareness development which can be taught: physical and sensory, psychological (emotional), and interpersonal.

Physical awareness necessitates first developing increased awareness of body position, body-space sensations, and natural responses. In addition

"Any training which improves the person's mechanical competence can develop self-reliant people."

one can concentrate on improving balance, coordination, strength, endurance or individual small muscle control. The person can also develop an increased sensitivity to all his sensory perceptions, learning to diminish or intensify each selectively. One result is increased discrimination and appreciation of sensory input. Through these same efforts awareness and control of many bodily functions can be improved. Each functional aspect of the body can thus be improved over its current state. Another benefit is the maintenance of health and improved physical efficiency. Increased physical awareness and conditioning can be gained through participation in individual or group athletic activities, ballet, interpretive dance, sensory awareness groups, hiking, meditation, fasting, yoga, sleeplessness or, ultimately, bio-feedback training.[7]

Developing an increased psychological awareness also involves many dimensions. People must become aware of the silent messages (body position, facial expressions, gestures, subtle changes in tone of voice) they give with each verbal communication. The individual should learn to explore his emotional and intellectual reactions and to express himself openly and honestly. He can thus develop the ability to analyze his motives for any statement or action. However he must not sacrifice spontaneity and freedom in his behavior. Some persons will need to develop control over spontaneous hostile, damaging or thoughtless expressions. Others will need to develop spontaneity and less rigid control over their thoughts, emotions and actions. They must also learn to constructively express angry and hostile feelings, as well as feelings of concern, care, affection or joy.[7, 11, 12]

To improve interpersonal awareness each person must learn to be sensitive to and evaluate the effect of his behavior on others. He must be aware of his own feelings, perceptions and attitudes. He should recognize that time, place, age, sex, intelligence level, mood, and social, economic, vocational and educational backgrounds may alter the other person's reactions. He thus can learn which behavior is appropriate for different situations. He must also learn to be open to experiences, be able to feel and appreciate deeply, and be ready to integrate these perceptions into himself. Most importantly he must learn to be open, honest, authentic (self-revealing), spontaneous and affectionate in his dealings with others. He must learn to examine his personal beliefs, ideals and biases in the process.

Increased psychological and interpersonal awareness can be attained through introspection, meditation, fantasy, psychotherapy, group inter-

actions, or various readings. In our schools, psychological awareness programs can be interwoven (by adequately prepared teachers) into family living, home economics, social science, literature, and psychology courses. Personal examples must accompany any teaching about certain attributes: openness, honesty, spontaneity, authenticity, and acceptance and evaluation of criticism. There is no reason such applied psychology courses cannot be woven into church, recreation center and other institutions' programs as well as in the schools.

Interpersonal Relations. The basic elements for meaningful interpersonal relations are concern, understanding, sharing, responsiveness, respect, and interdependence. Healthy person-to-person interactions require concern for maintenance of the other's identity, individuality, and interests. With this concern goes the sharing of expressions of alive humanness (joy, sadness, humor, knowledge) which enhance the other person's sense of being alive. This concern and sharing promotes the growth of all involved in the interaction.

To develop meaningful interpersonal reactions requires recognition of the aspects mentioned in psychological and interpersonal awareness. Each person must take responsibility for his own growth and use his own feelings, actions, reactions and interactions as a base for learning. In his interpersonal relationships he can learn to consciously examine his values, his biases and his assumptions about others. He should also learn to make appropriate choices and decisions, to act on these decisions and to take responsibility for his decisions. At the same time he should learn how to trust others and risk his self-image with them. He can also learn to constructively defy attempts at acculturation and how such defiance can contribute to freedom and growth. Yet he should learn not to interfere with other's rights while protecting his own.

Interpersonal relationship growth can occur in any group interaction or what Dr. William Fishburn calls "Experiences-in-Being."[13] These may be called sensitivity groups, training groups, responsivity training, actualization groups, encounter groups, or confidence training. Expertly managed experiences-in-being, well-run group psychotherapy or psychodrama can help the person develop healthy interpersonal transactions. Interpersonal relationships can also be stressed in courses dealing with social customs. These relationships can be stressed in any course or activity which involves interpersonal cooperation for project completion. This type of applied

psychology can also be taught in church and recreation center programs as well as in adult education courses or regular school curricula.

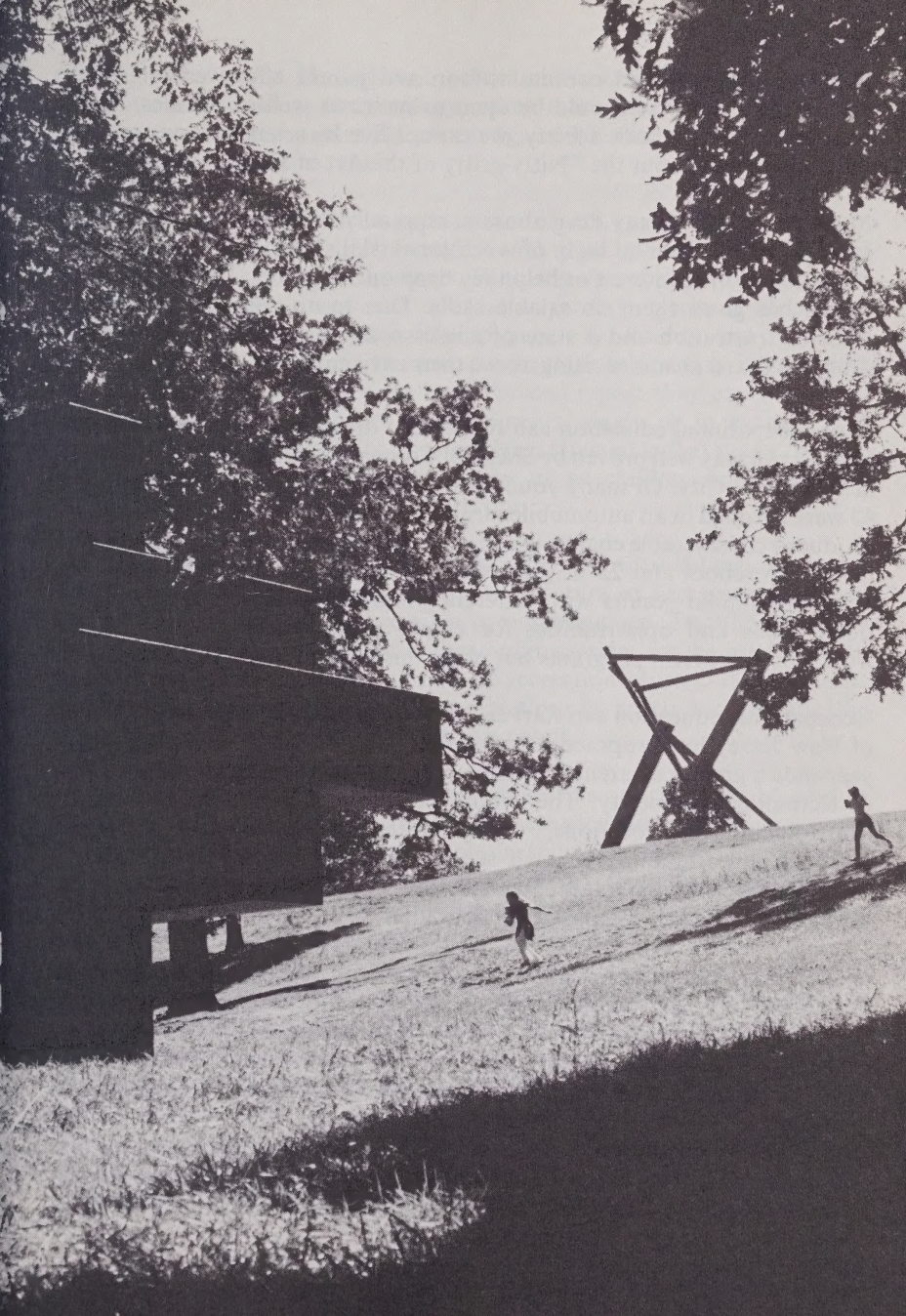
Self-reliance Development. This category may seem pompous to some or self-evident to others. It is prompted, however, by the almost universal sense of personal impotence which I find in chronic drug users. I also find this feeling prevalent in many of today's urban adults who abuse alcohol, tranquilizers, sedatives or stimulants.

Practical citizenship courses need to be developed which would prepare people for responsible citizenship. These should stress ways members of minority groups can influence the various layers of the establishment bureaucracy. Only when they feel able to positively affect their environment and exert more control over their potential destiny will people lose their feelings of impotence.

Part of the sense of impotence derives from feeling helpless in one's own home when something needs repairing. It is no wonder that a course such as "Applied Physics—Nuts and Bolts of Everyday Life" attracts as many young women as young men. These people are tired of being unable to repair small household electrical items and welcome the opportunity to learn how. Almost as great a success have been courses for women in minor repairs and maintenance for automobiles. Another course many people could utilize would include minor carpentry, plumbing, and electrical repairs for the home. Many school systems could produce more self-reliant students by developing minor household repair and maintenance courses. (We might have safer, more pleasant homes as a result.) Any training which improves the person's mechanical competence can develop self-reliant people. Regardless of the person's ultimate goals and careers, any manual skill training can improve his sense of control over his environment.

Another practical course which should be offered is family management. Such a course would include topics such as budget planning and money management, problem solving techniques, cooking and housekeeping skills, diet and menu planning, accident prevention and home first-aid,

"We need to make art exhibits more accessible to our populace.



child care, parent-child communication and parent effectiveness. All or part of such a course should be open to males as well as females. Since, even in our technocratic society, we cannot live by science alone we must develop courses about the "Nitty-gritty of the Art of Everyday Living."

Vocational Skills. Many drug abusers, especially those from lower income groups, suffer from a lack of vocational skills. Finding conventional education of little interest or help they drop out of school. Others find high school has given them no salable skills. Due to an enforced idleness, a sense of frustration and a state of aimlessness they turn to crime and/or drug abuse as a means of rising above their environment.

That occupational education can reverse the drift toward dropping out of high school was well proven by Shell Oil Company at Brandeis High School in New York City. Of many young people considered potential drop-outs, 42 were enrolled in an automobile mechanics course. The course apparently produced considerable change in self-concepts of the group as 41 graduated from high school and 23 of them went on to college.[14] Other companies have had similar results with different programs designed to give vocational skills and opportunities for employment. These are not "make work" or short term programs but programs which have a lingering effect.

Occupational education can start as early as kindergarten. Governor Cahill of New Jersey has proposed "Technology for Children," to give 5 to 11-year-olds a greater awareness of their potential and a better understanding of technology in society. This would be followed in middle schools by "Introduction to Vocations," designed to provide broad-based occupational understanding. In high school, vocational education programs inter-related with job placement services would provide broader backgrounds for educational and career decisions.

In addition, remedial vocational education or job retraining must be developed to assist prison inmates, parolees and drug abusers seeking reentry into the mainstream of society. Broader opportunities for vocational training must be given welfare recipients, as well as the others, in an effort to restore human dignity and utilize precious human resources.

In the middle schools students can be offered home economics, graphic arts and industrial arts. Included would be printing; masonry; carpentry; foundry work; welding; and plastic, wood and metal machining. Typing

can begin this early. During high school the vocational courses offered could include cooking, cosmetology, office machines, textile and leather repair, computer programming, plumbing, health aide, stenography, auto mechanic, and appliance repair.

Aesthetic Experiences. The appreciation of art, music, dance, nature scenes, and other aspects of "beauty" is said to be intensified by LSD and other consciousness distorting drugs. With the use of these agents people report they perceive in new and unusual ways: flat objects develop three dimensions; inanimate objects develop plasticity, fluidity and mobility; colors can be felt, music can be seen; color relationships vary in intensity; personal identity boundaries are lost. Persons report they can selectively listen to and intensify voices or instruments, singly or in groups, at a concert or in a recording. What has not been stressed is that many of these altered perceptions were experienced by us as children and are again accessible through effort, and concentration.

Also underemphasized, and often not taught, is how to appreciate artistic works—music, painting, pottery design, sculpture or literature. We need to make art exhibits more accessible to our populace. Traveling displays with informed, informative and understanding guides can be used to teach art appreciation in churches, schools or recreation centers. If these visits are intermingled with visits and demonstrations by artists and artisans, the various types of art can become more meaningful.

Recordings by leading musical groups, orchestras or artists can be used in classes on music appreciation. The use of these recordings with discussions, plus visiting artists can also aid people in acquiring new tastes or understanding new music forms. Contact with performing artists in discussion groups will allow people to better understand what is necessary for successful production and performances.

Art and music appreciation courses in the schools should be designed to give meaningful personal experiences and to enhance the enjoyment of various types of art. Such courses should be ungraded and involve the active participation of each member in choosing, preparing, and presenting topics for discussion.[3]

Creative Experiences. We must accept that creativity is not a special gift of some select, few people. Creativity is a trait shared by all humanity to a

greater or lesser degree. Every person will show variable degrees of creativity in certain areas of intellectual performance. To be productively creative does not require the individual to produce something which is socially useful or desirable. The creative production need only be an expression meaningful and desirable for the producer.[15]

The creative process involves questioning and challenging perceptual reality and life through reflection, recreation and reinterpretation. To translate inspirations into products involves:

1. acquiring a large number of personal and vicarious experiences:
2. a willingness to heed vague feelings and intimations, to try new ways of seeing, hearing or feeling familiar objects, and to strive for new insights;
3. awareness of the feelings and emotions produced by each experience.
4. combining the acquired sensations, knowledge, experiences, and emotions in new and varied ways;
5. expressing one's associations from a particular situation in a personally meaningful way;
6. evaluating the product and its relevance to satisfying the producer's impulse; and
7. persevering in the effort until the product satisfies the producer. [15, 16]

Creative expression can take place through sketching, painting, sculpting, weaving, pottery making, gardening, conversation, cooking, creative writing, composing, singing, dancing, or acting. These activities can be provided through school, church, or community center programs in art, interpretive dance, craft shop, woodworking, band, orchestra, chorus, or drama. A prime requisite for these activities is that they encourage creative application of imaginative mental productions. Such activities should also encourage individuality, innovation and experimentation. Leaders and teachers should realize and accept that resistance to acculturation and refusal to "adjust" one's creative expressions are often the mark of a healthy character. In the schools courses such as these should be ungraded, for who can judge the total relevance of another's work? Teachers should only determine whether or not a student has any talent for working in a given medium and direct him appropriately.

Intellectual Experience. Again we offer a self-evident, but neglected area. Many Americans have lost the thrill of learning for personal edification due to our current stress on graded, structured, learning situations. Intellectual challenges can be used to alleviate boredom, to gain understanding and to increase one's own awareness.

Literature appreciation courses can be altered to emphasize the history, customs and attitudes of various cultures, offer vicarious experiences, or simply, relaxation. Discussions of what one has read also provides increased awareness and rewarding interpersonal relationships. Other avenues of intellectual development are creative games and puzzles, self-hypnosis, training in concentration, memory training, synectics and youth-teaching-youth programs.[4]

Philosophical-existential Explorations. The recent emphasis on the existential questions—"Who am I?" "What is my past? . . . my future? . . . my goal? . . . my role in society?"—indicates a personal search for meaning which appears currently unanswerable. In the past, member of the extended family or elders in the community helped young people to find meaning in life, to grasp the nature of the universe, to establish personal identity and to organize a belief structure. With our mobile society, the current loosening of family ties and the urge to shift grandparents into some removed "home," we are neglecting this need. Discussions, seminars or courses on the meaning of life, the nature of reality, ethics, mores and value systems can be incorporated into social studies or offered by various institutions in the community. There are many non-degreed, self-educated philosophers in our communities who would be willing, if asked, to participate in such an endeavor.

Spiritual-mystical Experiences. This area is extremely important as many young people and adults are discouraged by organized religion. To them, there appears to be more concern for ritual, ceremony, dogma, and large budgets than for inherent human worth. They recognize that adoption of a personal philosophy may involve an established religious belief. However, it need not involve church membership, regular attendance at services or necessarily identifying with any certain group.

The essential qualities of a religious experience are that it must:

- be extremely personal, applicable to everyday life and constantly evolving;

- produce recognition of a force or entity greater than the individual;
- be involved with the questions of self-fulfillment and the ultimate purpose of life;
- produce an indescribable state, and
- produce discernible positive changes toward self, others, life and the experience.

Such a religious experience has come to many of our young people through Eastern religious disciplines which seem more concerned with the individual's inner experience. Others have obtained the experience through the community oriented "underground church."

Valid techniques for attaining intense spiritual experiences or higher levels of consciousness are available. Books concerning these techniques and studies of world religion should be available in community and school libraries. Communities can develop courses on applied mysticism, Yogic technique and methods of personal spiritual development. With a rising interest in glossolalia (speaking in tongues) among seminary students our churches may do well to re-examine the mystical aspects of Judaism and Christianity. The question is not *whether*, but *how much* diversity organized religion can tolerate.

Social-political Involvement. Some of the most "turned-on" young people in recent years have been those who served in the Peace Corps and VISTA. The major factor was that they gave of themselves to help others toward a better way of life. During the 1968 and 1970 political compaigns many young people became active in supporting candidates and getting voters to the polls. In each of these activities there was commitment to an ideal and

"Young people . . . should be involved in the planning, decision-making and implementation of any programs which affect them."

a chance for active participation. Commitment and participation with maintenance of individual identity are necessary if offering social involvement as an alternative to drug abuse.

The nature of the commitment or the apparent direction of social and political action of young people may be disagreeable to adults. Often it is disagreeable because it disturbs the status quo, challenges our comfort and opinions, or confronts us with our hypocrisy. As Dr. Arnold Chanin has pointed out, we should realize that many leaders today were considered "activists" in their youth.[3]

Idealism without opportunity for implementation of necessary change frequently turns to cynicism. Therefore, it is better that our youth take an active part in directing the course of our nation, socially and politically. Rather than allowing or forcing them to drop out of society, "wallow in passivity," and use alcohol or other drugs to dull their social and psychological pains, we must encourage all our citizens to be actively involved. The 18-year-old vote and the current ecology campaigns are a good start.

To involve young people in the social-political arena we must:
- make use of their ideas and idealism to better our society;
- tolerate and encourage non-conformity of social commitments;
- encourage and give recognition for involvement;
- be willing to act upon suggested, necessary social change, and
- help create a better social milieu for all persons.

We must be willing to listen and act.

Social activism can involve door-to-door canvassing, voter registration drives and distribution of materials regarding social issues. It can include social service projects such as assisting the aged, infirm and handicapped, or tutoring underprivileged youngsters. Young people should be given more responsibility in preservation and restoration of the natural environment, anti-pollution campaigns and playground construction. They can do non-partisan lobbying for social causes or field work with politicians and public officials. In community action programs their opinions and recommendations should be sought. They should be involved in the planning, decision-making and implementation of any programs which affect them.

We may consider the political position of our young people as extreme and their effort misdirected. However, we judge from a different vantage point,

different backgrounds and a different social consciousness. Communication, consideration and cooperation will help us all become more socially conscious and properly directed. What young people need is the chance and recognition for involvement.[17]

Sexuality, Sexual Expression, and Sexual Experience. Various societies attach different degrees of importance to love as a desirable human experience. Consequently a wide variety of substances have been used in efforts to direct and increase the desired processes of love. Drugs may be used in efforts to win love and affection, to lessen defenses and social inhibitions, or to increase one's sexual desire, performance, or the sensual pleasures of intercourse.[2, 3]

Courses on human sexuality must stress that healthy sexual identities and satisfying sexual relationships do not come from a pill, a drink, or a cigarette. Nor do they come from viewing natural traits or processes as evil or dirty. Productive sexual identification results from the acceptance of one's physical and psychological being as normal, natural and beautiful.

Expression of one's sexuality may take many forms without the specific act of coitus. Non-coital aspects of sexuality are the capacities for tenderness, concern for another, the ability to know another person intimately and to share one's intimate self with another. Sexuality is a way of exhibiting a segment of the individual's personality and of one's ability to feel. As Allan Fromme stated, in *The Ability to Love*, sexuality entails using fully one's intimate senses (touch, taste, smell) as well as the distance senses. By learning full sensual appreciation the person has a greater sexuality with a full capacity for appreciating, expressing and enjoying all the ramifications of the emotion we call "love."[18]

Sexual intercourse may provide a release for psychological and physiological energy. It can thus be used as a tranquilizer or "potent pain reliever." Unfortunately, pent-up energies of depression, boredom, frustration, or hostility may also be released and expended on the partner. Coitus may also be used to obtain security, personal esteem, a sense of control over someone else, or some "kicks."[18]

As has the incidence of drug abuse, the use of sexual encounter merely for the relief of tensions has been shown to increase during times of widespread cultural anxiety or rapid cultural change.[19] Such sexual encounters

and drug abuse may reach near-epidemic proportions in certain areas or cultural subgroups. These encounters occur more frequently when the dominant culture fails to provide available and reliable institutions wherein the person may achieve meaningful gratification. Our culture must accept the premise that human sexuality is clean, healthy, part of human nature and a natural source of pleasure. We must teach about responsible sexuality and sexual expressiveness, as well as about non-coital sexual expression and sexual release. [20, 21]

Meditation and "Mind-trips." To many American adults the word meditation brings forth mental images of deep, religious thought, some strange transcendental state of an Oriental mystic, or a state of inactivity which, although not understood, is somehow "bad." A "trip" or "tripping-out" usually is thought to be only drug induced. Both of these terms, *meditation* and *trip*, refer to a subjective experience to achieve a state of consciousness so heightened and unmediated that it overwhelms and replaces the individual's perceptions of self and of the world. The person usually has a relative unawareness of his immediate surroundings, and, afterwards, cannot find words to adequately describe the experience.[22] If this altered state of perception results only from conscious control of thought processes it may be called meditation, daydreaming, focusing of attention, delving, or "mind-tripping." In each of these states fantasy, mental imagery, and altered states of consciousness variably play an active role.

MEDITATION is a means of achieving psychological peace and access to our inner core of tranquility and strength. Meditation, as Dr. E. W. Maupin has noted, is a means of "developing contact with inner experience and deeper resources . . . ." Meditation promotes a sense of inner personal resources, of solidity and strength, whereby one can gradually encounter and master areas of trauma, helplessness, and defeat in his life. During meditation the person may contemplate specific goals or problems and various perspectives of any given situation. Such a process is used by many successful businessmen as they mentally explore possible ramifications of various moves.[23]

Daydreaming and meditation can also be used as a defense against boredom, as a way of heightening pleasure, or as a way to resolve feelings of fear, depression, anxiety or anger.

FOCUSING OF ATTENTION is the term Dr. William Soskin has given an early

process in meditation. This is the process whereby the person "learns to progressively focus his attention in such ways as to free himself of the unending flow of trivial thoughts, fantasies, recurrent preoccupations and impulses, so that he might ultimately experience a period of genuine conscious quietude." The aim is to produce a relaxed awareness in which the flow of thoughts is reduced and a sense of detached observation is maintained. Later, this state of detached observation can be utilized for contemplation of specific areas without interference from other random thoughts.[24]

DELVING is the name Dr. Soskin's group at "Project Community" have given to a series of "guided daydreams." The participants are given an opportunity to explore along the borders of consciousness without the use of drugs. Participants are first led into a state of deep relaxation and then guided through various stages of a preplanned fantasy. Each fantasy is designed to produce vivid, exciting, and informative experiences. These experiences are somewhat akin to those available from the consciousness-distorting drugs—LSD, mescaline, and marijuana. Instead of merely private experiences the individuals have a common experience which they can later share, compare and discuss.[24]

MIND-TRIPPING, like daydreaming, can be used for relaxation or recreation. With conscious control of thought and perceptual processes a person can obtain most of the altered perception afforded by consciousness-distorting drugs such as LSD. This includes the loss of personal boundaries and a feeling of blending into one's surroundings; the illusion of inanimate objects developing mobility, fluidity or plasticity; the perception of one sensory stimulus as another (seeing sounds, feeling color), and the changes in intensity, clarity, form, function and relationships of objects perceived. During a mind-trip the person may become so involved he is insensitive to persons or occurrences near him. This may occur while reading, listening to music, observing nature scenes, viewing art, observing some scene of intense beauty or being intensely involved with another person. Thus the mind-trip becomes a time and place apart from the everyday world. One can interrupt the trip ("come down"), if necessary without residual intellectual impairment. Conditions permitting, he can "trip-out" again.

Mind-trips can be conjured out of one's imagination, with minimal stimuli, when necessary. All that is required is repetitive effort, concentration, and conscious control. Three examples which I offer high school and college

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Papers should be typewritten, double-spaced, and the original, not a carbon copy, submitted. Manuscripts should not exceed 4,000 words. Author's full names, academic or professional titles, and complete mailing addresses should be given.

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Recent preoccupation with "youth and drugs" has nearly obscured the fact that abuse of the old drug, alcohol, remains our biggest chemical problem. Trends are now being reported which, if verified, could lead to new priorities for research, treatment, and education in this field.

The once ubiquitous drug-crisis intervention centres seem to be losing their popular appeal and support to more comprehensive community information and referral centres. Another trend, attributed by some to lowering the legal drinking age, is the apparent increase in consumption of alcohol by young people. First indications came from youth workers concerned about growing public intoxication among street kids. More recently, health workers report teen-age "juice freaks" vying with "speed freaks" for medical services.

Overall it would appear that panic is being displaced by perspective and the drama and distortions of the past are being tempered with information and experience. And some good lessons have been learned.

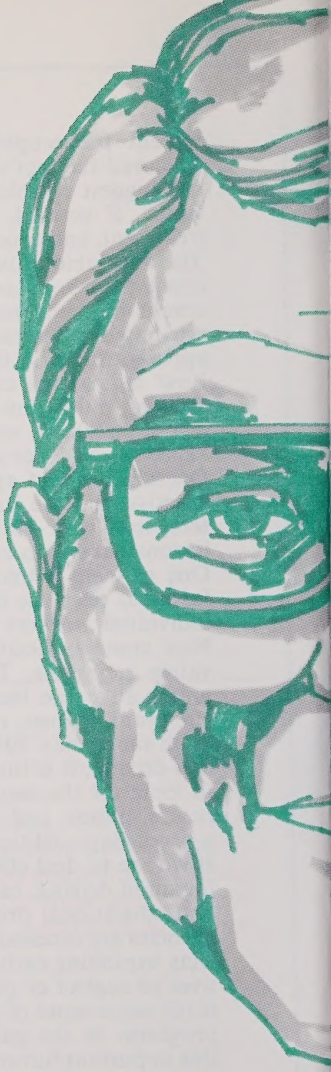
One of them is that the day of unilateral institutional or professional response is over. Co-operation between agencies and individual workers can provide better services at lower cost. New complex health and social problems require bold, innovative responses. Traditional services and experimental programs alike can learn from each other without the burden of irrelevant dogmas, rhetoric, and hostility.

With more than 50% of traffic fatalities attributed to drinking and driving, it is time now to bring the benefits of co-operation to bear on the impaired driver. Evidence and concern from courts, police, and motor-vehicle licensing authorities suggest a promising coalition.

If we are to deal effectively with the appalling consequences of impaired driving, careful research plus innovation in treatment and educational programs and co-operation between relevant agencies are necessary. The experience of other Foundation projects exploiting early intervention and providing viable alternatives to neglect or punishment is available. What is also needed is the same sense of urgency and concern that produced useful programs in the past, to mobilize the required resources for this important future action.

L.A.P.

editorial



THE VITAL TASK OF TRANSITIONAL MEN

BY PATRICK HART

ILLUSTRATIONS BY MIKE DYWELSKA

Most of us are familiar now with the term "future shock." We are being told by the scientists and by the philosophers that our lives are changing

Mr. Justice Hartt is an Ontario Supreme Court Judge and Chairman of the Law Reform Commission of Canada. Following are excerpts from a speech to the Empire Club of Toronto, December 7, 1972.

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at an unprecedented rate; and our experience tells us more and more often that this is true.

But it is also becoming apparent that our society is not only developing much faster; it is being transformed into a quite different kind of society, to one in which we have yet to learn how to live.

This new society we are entering has been called, by the renowned British economist Robert Theobald, "the communications society." This is a catchy phrase but what does this term tell us?

It says that one of the most important features of the coming age is that we can communicate with each other faster and in greater complexity than at any time in history. In the coming world of computers, television, satellite links, laser line videophones, we can exchange ideas almost as soon as they are conceived. We discover things faster. We tell other people about them faster: and the more we become aware of this world-wide exchange of information, the more we realize the universal ramifications of everything we do . . .

Drug Problems

We have seen in very recent times the problems created by advancing technology in the world of drugs.

In the space of three short years our children learned more about the botany, pharmacology, and distribution economics of psychedelic mind-expanding drugs than would have been possible in a lifetime, only a generation ago.

If the game had been played by the old rules, our children would have learned about drugs slowly; and drug abuse would have entered our collective experience at a speed that we could deal with through traditional institutions; from the family, the church, and the school to the law. Yet overnight our children know how to use, manufacture, distribute. If we think for a moment, not of the numerous social casualties of this sudden rapid learning experience, but of the survivors, we can see that the laws did not respond to them.

An entire generation of children experimented with LSD, learned from their experience, and largely abandoned it while we attempted to control

their experimentation with laws that were designed for a wholly different purpose: of regulating the manufacture of dangerous drugs by commercial manufacturers.

Already, mind-expansion and the exploration of inner space are entering a new stage. A new generation of young people is beginning to explore electronic methods of self-knowledge and pleasure through bio-feedback training, a technique which presumably allows you to control the state of your health, happiness, and well-being. The ultimate possibilities of this type of control being, we are told, "nothing less than the evolution of an entirely new culture where people can change their mental and physical states as easily as switching channels on a television set."

Is this likely to create a problem for our society? If it does, our laws have no ways of responding to it. There are no precedents and if we allow the laws to adapt at their traditional speed, society will, in all likelihood, have abandoned bio-feedback in favor of something else long before we are ready to respond.

Yet if we acknowledge that new ideas are coming at us at this startling pace, what of the old values? Do they have a place?

Custodians Needed

I would suggest that our traditional values do indeed have a place; and to ensure that they are not lost, we must make sure that there are custodians.

I would suggest that it is our role to be custodians of these values and to find ways of making them available as points of reference in this rapidly-changing world.

But I would emphasize most strongly that I do not believe it is possible, or desirable, to impose traditional values on the generation that is entering this post-industrial age.

Our children are undergoing experiences so different from ours that it seems to me unreasonable to suppose that all our values will fit their situation. This makes us feel uncomfortable but I do not believe that this need be so.

It is always disturbing when your child comes home and tells you about

something you completely fail to understand, whether it is a new system of mathematics or a new attitude to dating . . .

As transitional men we have a place, as a link between the age that is ending and the new and often mysterious one that we are entering.

If the industrial age is dead I suggest that we do not need to die with it.

I suggest that we have a vital task. It is our task to usher in this new era. It is our task to make available, not oppressive, simply available, those traditional values which future generations may need. We cannot choose for them . . .

But if we are to make our values available in this new era of technology and rapid flux, we must not be hurt if our values are sometimes rejected.

Values Rejected

Older values have always been rejected. In earlier, more leisured days, the rejection took place gradually over a generation or two, or even a century. Now it takes place over breakfast. We may be alarmed but we should not be surprised . . .

Parents always try to protect their young from what their experience tells them is dangerous. Parental cultures are no different. They also try to protect youthful emergent cultures. But protect from what? The rate of change is so rapid that our experience is of little use if we limit ourselves to issuing baleful warnings of a phenomenon of which we have just become aware and which is already passe to our children.

No. Rather it is our task and our duty to give them free access to those

A new generation of young people is beginning to explore electronic methods of self-knowledge and pleasure through bio-feedback training . . ."

traditions and values which will help them in their task of survival in the new worlds they explore. Our only fear should be that we have not given freely enough . . .

I have spent some little time outlining what I consider to be our personal challenge—yours and mine—because by analogy I see the role of the Law Reform Commission of Canada in a similar context. The statute which created the commission charged it with the responsibility of developing "new approaches to and new concepts of the law in keeping with and responsive to the changing needs of modern Canadian society and of individual members of that society." Clearly, to carry on with the accepted techniques of law amendment and change in the face of this sweeping mandate would be to completely fail to carry out the responsibilities imposed by Parliament.

New Techniques

It would have been nice if we could have operated strictly by precedent and measured modification of those precedents. We cannot: so we find new methods and techniques to encourage public participation in a continuing comprehensive dialogue involving a reconsideration of our system of values—and thus in some small way facilitate the transition to the new age.

Traditionally, the law and its enforcement machinery has been principally directed toward interests related to economic, proprietary, and purported moral values as espoused by the dominant groups in the particular society. We now have the possibly unique opportunity to assist in adapting the social force of the law to the minimum needs of a new society, i.e., to the protection of values concerned with individual dignity and acceptable quality of life standards for all.

"Our children are undergoing experiences . . . different from ours . . . this makes us feel uncomfortable . . ."

APT.
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This is the challenge which faces us on a societal level—different in scope but not in kind to that which confronts us personally in our individual lives.

If we accept this transitional role, either within the context of the family, commerce or a law reform commission, then certain changes become inevitable.

We must learn to respond more appropriately and we must begin to find ways of testing our traditional values more quickly in new situations to discover whether or not they are relevant.

So we have a choice. To die out with the decaying industrial world which has for the most part served us well, or to take up the new career of transitional men—prepared to play our role in forming the new social conditions which hopefully will be characterized by process and co-operation rather than force and competition.

Unless you and others like you participate in this new full-time mid-wife career of transition(ism), our children face a probable life of chaos or, with more certainty than I like to think of, no life at all.

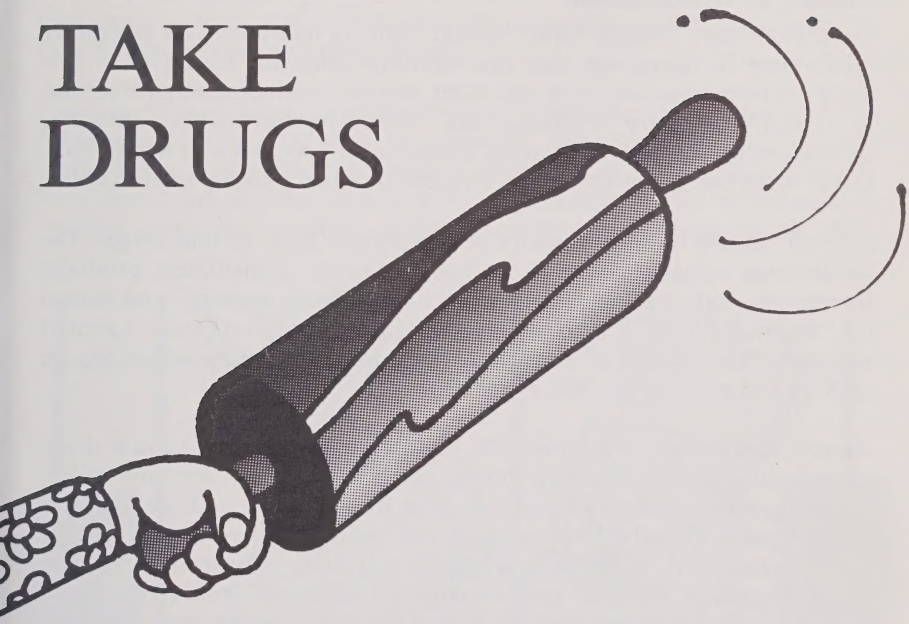
I am excited by the future, but I cannot be optimistic unless people like you and I leave the security of our industrial age cocoons and take up the challenge of becoming transitional men.

. . . our experience is of little use if we limit ourselves to issuing baleful warnings of a phenomenon of which we have just become aware and which is already passe to our children."

THE REINFORCERS FOR DRUG ABUSE:

ILLUSTRATIONS BY WALTER STEFOFF

WHY PEOPLE TAKE DRUGS



by Thomas J. Crowley

Learning can be defined as behavioral change through experience, and drug abuse behavior, which develops with experience, is therefore one kind of learned behavior. If a particular behavior is regularly reinforced, organisms learn to generate that behavior with increasing frequence. This is *operant learning* in which the organism operates upon the environment to obtain

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reinforcements; such learning probably contributes heavily to drug abuse behavior. Relying on learning theory, this paper will attempt to synthesize available information on the reinforcers for drug abuse behavior into a clinical approach to drug-abusing patients.

Classes of Reinforcement

Drugs in Primary Positive Reinforcement. Primary reinforcers are inherently reinforcing; by themselves they can reinforce behavior. Examples of primary reinforcers include food, sex, water, and electrical stimulation in certain brain loci. Secondary reinforcers are learned reinforcers. For instance, money has no inherent reinforcing value, but it becomes a powerful reinforcer when one learns that it can be used to obtain primary reinforcers.

Clinical reports indicate primary reinforcement from certain drugs. The intravenous administration of methamphetamine immediately produces intense physical pleasure described as "a whole body orgasm" and named the "flash" or "rush."[1] Intravenous heroin administration causes a similar sensation. The reports of users leave little doubt that these sensations are highly reinforcing at the first exposure.

Animal studies have confirmed the clinical impression that certain drugs are primary reinforcers, while others are not. Monkeys with indwelling cannulae press levers to obtain injections of morphine, codeine, cocaine, amphetamine, pentobarbital, ethanol, and caffeine.[2] They do not press to receive nalorphine, nalorphine-morphine mixtures, chlorpromazine, mescaline, or saline. Schuster and Thompson's thorough review[3] concludes that certain drugs are primary reinforcers for self-administration in several species.

Reinforcement presented immediately after a behavior is more effective in increasing the frequency of the behavior. Intravenous narcotic and stimulant administration is reinforced almost instantly by the drug flash, and, as expected, the rapid reinforcement of i.v. administration produces a more persistent and pernicious drug habit. Similarly, even orally, self-administration behaviors develop more frequently with rapid-acting barbiturates than with the slow-acting ones.[4]

Assumedly, a dose of intravenous methamphetamine would be physically pleasurable to anyone. Why then do some subjects continue to use drugs, while others do not? Users in impoverished environments, with few other

reinforcers available, will probably seek drug reinforcement more actively. This is likely the case with restrained, isolated, experimental monkeys; with heroin users in American black ghettoes; and with cocaine users in the Andes.[5] Similarly, long experience with disturbed, unloving parents seems to convince many young people that they can never achieve respect or love from others. These people have not learned to expect reinforcement from their environment, and so they may more actively seek the predictable, regular reinforcement of drug abuse.

Drugs in Primary Negative Reinforcement. In popular jargon, "negative reinforcement" is equated with "punishment." But technically, a negative reinforcer is a stimulus, the termination of which reinforces behavior.[6] Such stimuli are aversive, and negative reinforcement is the reinforcement resulting from the cessation of these aversive (punishing) stimuli. For

example, one may open the window when the room becomes too hot; the termination of the aversive, stimulus, heat, negatively reinforces the window-opening behavior.

Physical dependence follows the continued use of narcotics, sedative-hypnotics, and alcohol. When abstinent from these drugs, the chronic user becomes anxious, tremulous, and physically ill. The termination of this aversive, abstinence state by self-administration of the drug negatively reinforces the drug-taking behavior.

Negative reinforcement may help determine temporal patterns of drug abuse. Users of methamphetamine do not develop the extreme withdrawal symptoms of narcotic, alcohol, or barbiturate users. Since their immediate withdrawal discomfort is limited, methamphetamine abusers can frequently interrupt their "runs" of drug administration with "crashes" of abstinence.[1, 7, 8] Stimulant self-administration by monkeys and rats is also intermittent.[2, 8, 9] Conversely, human narcotic addicts,[10] and monkeys[2] lever-pressing for narcotics or barbiturates, steadily administer their drugs. Monkeys are only somewhat less regular in working for alcohol. Apparently, any drug affording primary positive reinforcement may be abused, but the habit's constancy in both animals and men is a function of whether developing dependence produces a withdrawal state, the termination of which negatively reinforces drug administration.

Mello[11] suggests that alcohol may impair one's ability to attend to or distinguish aversive elements of the environment. Even without physical dependence on alcohol, this "blotto" effect may negatively reinforce alcohol abuse by reducing the user's perception of aversive stimuli, and the same would probably be true with narcotics and sedative-hypnotics.

Drugs in Secondary Positive Reinforcement. As noted earlier, objects or situations develop secondary reinforcement properties through regular association with the obtaining of primary reinforcers. Thus, the past reinforcement history is very important. Some secondary reinforcers for self-administration seem unrelated to the pharmacologic effect of the drug, while others appear to be directly related to the drug's behavioral effects.

The "mellow yellow" fad exemplified secondary reinforcement *unrelated to drug effects.* Stories that the smoking of dried banana peels produced an hallucinogenic drug experience led to "banana rallies" in Greenwich

Village and widespread banana smoking. One third of users interviewed described a variety of "psychedelic" experiences, changes in mood, etc., from the smoke, but two thirds found little or no effect.[12] Most drug users have now apparently decided that "banana grass" was a hoax and have dropped it from the drug scene. This apparently inert placebo probably produced neither primary positive nor primary negative reinforcement. But the formation of social groups sharing banana rallies, banana music, and a joint defiance of authority could provide strong, secondary, non-drug related reinforcement for banana-smoking behavior in certain people. Mellow yellow use was probably reinforced only by these group activities.

Social grouping also seems to reinforce drug use in the methamphetamine colonies of large cities, permitting entry into a unique subculture.[7] But unlike mellow yellow, methamphetamine abuse also obtains potent primary positive reinforcement, contributing to the persistence of methamphetamine abuse as mellow yellow smoking disappears.

Other secondary reinforcement probably *is related* to the behavioral effects of the drugs. Three variables interact here: differential drug effects, differential dose effects, and the previous reinforcement history of the user.

First, different abused drugs have different behavioral effects. For example, placebo, morphine, pentobarbital, chlorpromazine, LSD-25, pyrohexyl, amphetamine, and alcohol each characteristically alter question-answering behavior in a psychological test.[13] As another example, while narcotics appear to induce passivity, alcohol and barbiturates may promote aggressive behavior. "The alcoholic takes a drink, goes home, and beats his wife; the narcotic addict takes a 'shot,' goes home, and his wife beats him."[10] Narcotic addicts receiving maintenance doses of opiates are rarely aggressive or anti-social, whereas these same patients become pugnacious, hostile, and sexually uncontrolled when receiving barbiturates.[14]

Second, variations in behavioral effects are not only drug-dependent, but are probably *dose-dependent* as well. Small doses of alcohol can facilitate sexual or aggressive behaviors (release of inhibition), while large doses cause behavioral suppression and coma. Similarly, when the "stimulant," methamphetamine, and the "sedative," phenobarbital, are administered to pairs of fighting rats, smaller doses of each drug increase fighting, while larger doses of each decrease it.[15, 16]

A user may find that his own behavior after a certain dose of a certain drug alters the behavior of others toward him. If that alteration proves reinforcing to the user (which would be a function of the third factor here, the *previous reinforcement history*), the drug-taking behavior itself would be reinforced. "The choice of a particular class of drugs may be explained on the basis of the assumption that a given agent facilitates or hinders specific patterns of behavior that are acceptable to the user."[14] Wieder and Kaplan observed that "when an individual finds an agent that facilitates his preexisting preferential mode of conflict solution, it becomes his drug of choice."[17]

Differential reinforcement accruing from the differential behavioral effects of various drugs appears critical to drug choice. "The common reaction given by narcotic addicts when asked why they have not used stimulants is that they do not like the effect. [A group of stimulant users] unanimously declared just the opposite. They wanted to speed up, act, accomplish."[18] One amphetamine-abusing patient[17] rejected heroin because "I don't want to withdraw, to sit back and nod, or get away from feeling. . . . I take a drug to cope with life, to be productive, and get recognition. I'm a shy extrovert, and people come to me when I'm on dex because I look happy, I'm not uptight, and my persecution complex is gone. I get inspired and enthusiastic, I can dream up and write term papers, I can think and concentrate." Finding reinforcement in the social effects of drug-induced activity, this patient chose stimulants over narcotics.

Another possible example of secondary positive reinforcement from drug-induced behavioral changes comes from the Lexington Hospital.[19] Amphetamine abusers there had markedly elevated 874 MMPI profiles, which were significantly different from the profiles of the general addict population. Although the MMPI is not standardized for this unique group, and so must be cautiously interpreted, this profile usually indicates insecurity, lack of self-reliance, passive-dependence, an inability to think for oneself, and a failure to assume a dominant role in interactions with others.[20] The drug effects reported by the Lexington abusers almost exactly reverse this description. Amphetamine increased their loquaciousness, alertness, and energy, produced a sense of cleverness, "crystal-clear thinking," and "invigorating aggressiveness," while it decreased their ambivalence. Thus, a specific drug effect on assertiveness may transiently "correct" a specific personality defect in assertiveness. Such behavioral changes could contribute heavily to drug choice.

POTENTIAL REINFORCERS FOR ABUSE OF VARIOUS CLASSES OF DRUGS

REINFORCEMENT	Narcotics	Stimulants	Sedative-hypnotics & Alcohol	Hallucinogens & Marihuana	Multiple Drug Use	Mellow Yellow (Placebo)
PRIMARY POSITIVE	+	+	+	+/0	+	0
PRIMARY NEGATIVE						
Termination of withdrawal	+	0	+/0	0	0	0
Reduced attention to, or discrimination of, aversive stimuli	+	0	+	+	+/0	0
SECONDARY POSITIVE						
Social, unrelated to drug effects	+	+	+	+	+	+
Social, related to drug effects on behavior	+	+	+	+	0	0
Chaining	+	?	?	?	?	0
SECONDARY NEGATIVE	+	0	+/0	0	0	0

+ reinforcement present

0 reinforcement absent

+/0 weak reinforcement probable

? data inadequate to form conclusion

TABLE ONE

Chaining may also produce secondary positive reinforcement related to drug effects. A whole series of previously neutral objects or events may develop reinforcement characteristics through association with a primary reinforcer. For example, depressing a syringe plunger is intimately associated with the heroin "flash." Plunger-depressing is thereby reinforced and it may also become a reinforcer itself, capable of reinforcing closely associated acts, such as inserting the needle. Needle-insertion could in turn come to be a reinforcer for applying the tourniquet, etc. Theoretically, chaining could be carried all the way back, e.g., to associating with a pusher. It is difficult to assess just how effective remote chaining is in maintaining drug-abuse behavior, but it may contribute something to recidivism. Through chaining, mere association with pushers might become mildly reinforcing. Seeking only that reinforcement, an ex-user would be exposed to pressure to use drugs again.

Drugs in Secondary Negative Reinforcement. In the absence of true drug withdrawal, syndromes like withdrawal have been elicited in animals by neutral stimuli that had previously accompanied genuine withdrawal. For example, nalorphine injections induce acute withdrawal in morphine-dependent monkeys, and if a buzzer is regularly paired with nalorphine, eventually the buzzer alone induces some withdrawal symptoms—heart rate change, salivation, and emesis.[21] Comparable phenomena do occur in rats[22] and might occur in humans.[23] For instance, a man who had frequently undergone genuine (unconditioned) withdrawal in his parents' home might undergo conditioned withdrawal upon subsequently entering their home. This would be a form of Pavlovian conditioning, in which objects or events regularly associated with an unconditioned aversive state would develop conditioned aversive properties. The user might then take drugs to terminate the *conditioned* withdrawal, and the termination would reinforce the drug-using behavior. This process can be termed secondary (or learned) negative reinforcement of drug-using behavior.

Reinforcers Obtainable from Different Drug Classes

Evaluating a drug-abuser lies in asking the question, "Why does this patient at this time take this drug?" "Why this patient?" and "Why at this time?" involve issues of the past reinforcement history and the current environment, which are beyond the scope of this discussion. But different classes of reinforcement may accrue from the use of different drugs, and "Why this drug?" may be answered by those differences, which are summarized in Table 1 and are discussed below. The table may prove useful in

evaluating drug choice and planning treatment, but it obviously cannot be applied blindly as a cookbook; its use depends on a thorough understanding of each patient's past history and current circumstances.

Narcotics. Primary positive reinforcement is considerable, especially when the drugs are used intravenously. Apparently, however, since many occasional users spontaneously discontinue narcotics,[24] this reinforcement must be weighed against others that the user has learned are available to him. One might eschew drugs, e.g., if they cost him the love of his girl friend; whereas, another user, whose past experience led him to believe that he could not be loved, might seek continuing reinforcement from drugs.

Negative reinforcement for narcotic administration is also powerful. The withdrawal syndrome is particularly uncomfortable, and relief comes very rapidly after drug use. Negative reinforcement from diminished attention to aversive stimuli in the environment (the "blotto effect" of "going on the nod") also follows narcotic administration. Narcotics thus chemically induce social isolation for people seeking it on the basis of past unhappy experiences.

The abuse of heroin and its relatives certainly obtains secondary positive reinforcement. The drugs facilitate entrance into a gang. For people who find rebellion against authority to be reinforcing, narcotic abuse places them in conflict with the law and with social mores. Thus, unrelated to drug effects, reinforcing social relations are established through narcotic use.

As noted earlier, narcotics may reduce aggressiveness. This direct drug effect on behavior might increase the reinforcement some users could obtain from certain environments. Chaining, in which each element of the chain of drug abuse behaviors develops reinforcing properties for preceding elements, is difficult to assess but may contribute to recidivism, as discussed above.

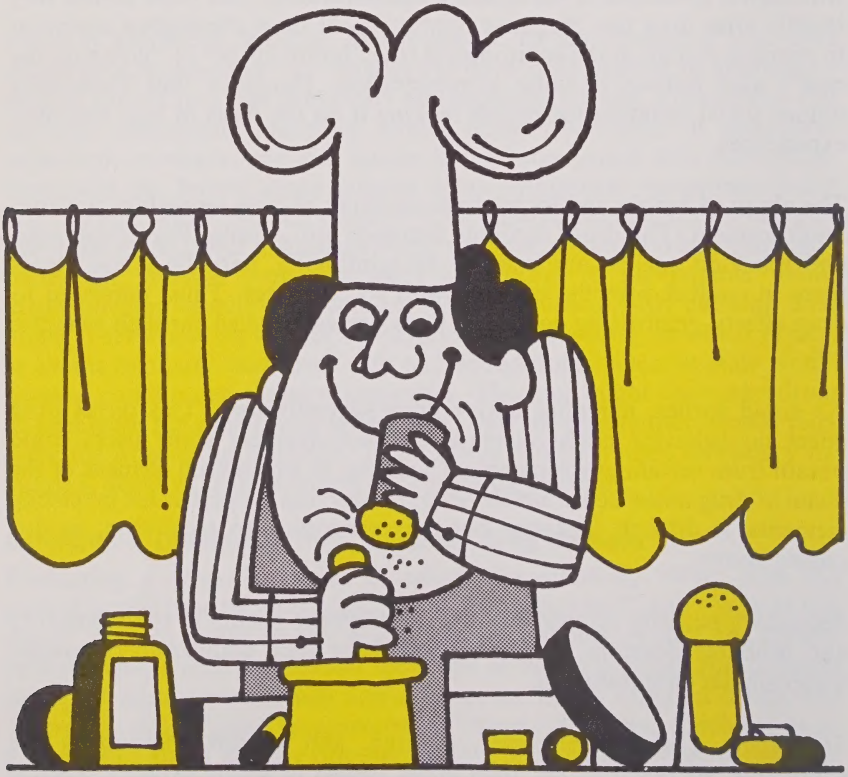
Secondary negative reinforcement with narcotics occurs in the laboratory and probably develops in humans who have been withdrawn repeatedly under similar circumstances.

Stimulants. The amphetamines, cocaine, and related compounds are stimulants. As noted above, their abuse results in strong primary positive

reinforcement. Primary negative reinforcement apparently does not occur with the amphetamines because the withdrawal syndrome is mild or absent, and, rather than decreasing attention, these drugs actually increase attention to aversive stimuli, eventuating in a paranoid psychotic state.

Secondary positive reinforcement unrelated to drug effects is probably considerable for young "speed freaks" in methamphetamine colonies. Drug use makes them part of a subculture, joining them with others rebelling against law and society.

Amphetamine abuse is probably the clearest case for secondary positive reinforcement from a drug-induced change in behavior. As noted above, the drug may be used by those who wish to increase their assertiveness.



Chaining might occur with stimulants, but the absence of a serious withdrawal syndrome makes it unlikely that secondary negative reinforcement could be important.

Sedative-hypnotics and Alcohol. The barbiturates and alcohol produce primary positive reinforcement,[2] and probably so do a number of commonly abused sedative-hypnotics (meprobamate, ethchlorvynol, glutethimide, etc.).

Although the withdrawal syndrome from these drugs is extremely severe, the sedative-hypnotics relieve withdrawal symptoms very slowly. In one study,[25] a patient in barbiturate withdrawal required 2 days of continuing drug administration to alleviate his symptoms; whereas, narcotic withdrawal is relieved almost immediately by narcotic administration. Since the strongest primary negative reinforcement for behavior occurs when the aversive state terminates immediately upon completion of the behavior, primary negative reinforcement with alcohol or barbiturate withdrawal is probably weaker than with the narcotics. Indeed, monkeys sometimes spontaneously stop alcohol self-administration, weathering marked withdrawal symptoms before beginning again.[2] This pattern is not seen in monkeys taking pentobarbital, which may be more rapid-acting than alcohol.

On the other hand alcohol and the sedative hypnotics exert a potent blotto effect. This may produce major negative reinforcement in states of severe intoxication.

Secondary positive reinforcers unrelated to the pharmacologic effects of sedative-hypnotics probably vary considerably with different patients. High dose amphetamine abusers sometimes mix barbiturates in the syringe, and they apparently take great pride in discussing their various recipes. The social reaction to such boasting is undoubtedly reinforcing for many users. For the housewife abusing sleeping drugs alone at home, "getting away with something" may be reinforcing, being a clandestine antagonistic action toward her husband or others.

The direct behavioral effects of different doses of sedative-hypnotics are complex and poorly understood. For example, when phenobarbital is acutely administered to rats, high and low doses affect aggression oppositely. Chronically administered, the drug has no effect on unlearned aggres-

sion, but impairs the learning of new aggressive behavior.[15] We are thus limited in assessing what secondary reinforcement may accrue from the direct behavioral effects of these drugs. However, clinicians have long suspected that one reason for the abuse of alcohol and sedative-hypnotic drugs is the expression of hostility. The aggression of the intoxicated husband may be a powerful aversive stimulus for his wife, and if spouse-punishing reinforces him, he may use intoxicants to punish her.

Chaining could occur with these drugs, and given the severity of the withdrawal syndrome, secondary negative reinforcement might take place.

Hallucinogens and Marihuana. There is very little information available on hallucinogen and marihuana reinforcement. But for 2,000 years, the Indians have used marihuana as a euphoriant,[26] suggesting some primary positive reinforcement for the use of hemp derivatives. In naive users, this effect is probably small, for they cannot distinguish the experiences of smoking marihuana or placebo.[27] Some other hallucinogens may produce primary positive reinforcement. In sub-hallucinogenic doses DOM ("STP;" 2,5-dimethoxy-4-methyl amphetamine) and DOET (2,5-dimethoxy-4-ethyl amphetamine) made human subjects euphoric.[28] However, monkeys will not self-administer mescaline even after one month of free, priming injections.[2] Users sometimes describe an LSD flash, but it is probably induced by the other drugs which contaminate 90% of "street samples."[29]

"Pronounced physical and mental discomfort" reportedly occur upon withdrawal from high-dose hemp abuse as practiced in India,[26] but withdrawal symptoms are not common at the lower doses used in Western societies. This obviously limits primary negative reinforcement from the termination of withdrawal.

These drugs may reduce the aversiveness of the user's environment by altering, rather than reducing his perception of aversive stimuli, producing another kind of primary negative reinforcement. By analogy, a laboratory rat which is regularly shocked in a chamber will crouch, defecate, urinate, and look "frightened" whenever it is in the chamber. If the walls are painted in patterns, the light brightened, and a tone is introduced, the chamber will be less aversive to the rat when he next enters it. Altering the stimulus parameters of a previously aversive environment makes it less aversive. The ability of the hallucinogens to alter one's perception of environmental stimuli may provide negative reinforcement to users who

find the unchanged stimuli aversive. One of my patients recently said to another, "Maybe you take acid to make the world beautiful when it really isn't." Perhaps the users' "need to feel"[30] is just a need to feel different.

Powerful secondary reinforcement unrelated to drug effects unquestionably promotes the use of marihuana and the hallucinogens. A cult of abuse has arisen around them, and membership is obtained through drug use. One becomes a member of an "in-group" by smoking marihuana or "dropping acid." Again, the element of rebellion in this drug use may be very reinforcing to certain people.

Smith[31] writes that LSD "produces an inhibition of aggression and an orientation toward nonviolence," and Blacker's group[32] noted "profound

non-aggressive attitudes" among users. The LSD experience is highly aversive (a "bad trip") if the user is angry at the time, Baker reports, and he speculates that chronic use might suppress anger through this repeated aversive conditioning. If verified, this would be a unique example of a direct drug effect being used in autoconditioning of emotional responses. There is no evidence for chaining or secondary negative reinforcement from the hallucinogens or marihuana.

Multiple Drug Abuse. Some people indiscriminately abuse numerous drugs, obtaining primary positive reinforcement from any drug with that capacity. Certain drug combinations could be more reinforcing than either constituent alone, one drug altering the biochemical response to another. For instance, we find that amphetamine's release of norepinephrine from rat brain tissue is significantly reduced if the animals have been chronically maintained on phenobarbital (Azzaro, Rutledge, and Crowley, in preparation).

Primary negative reinforcement through withdrawal is unlikely since most indiscriminant users probably do not take any one drug frequently enough to develop physical dependence.

Secondary positive reinforcement unrelated to drug effects may follow multiple drug use. The now-familiar reinforcement of social grouping again emerges from newspaper reports of partying youths drawing blindly from a bowl containing various pills.

Primary negative reinforcement through altered attention and secondary positive reinforcement from the behavioral effects of a particular drug must be relatively unimportant to people who randomly mix drugs. If the user's "mixed bag" includes alcohol, sedative-hypnotics, or narcotics, there would be some primary negative reinforcement through the blotto effect. But these users do not habitually seek speed, go on the nod, nor get blotto. Such behavioral effects, as noted above, probably contribute to drug-selection, and the chief characteristic of this syndrome is nonselection. Of course, this would not apply to those users who habitually and carefully combine only certain drugs in certain proportions.

Again, there is no direct evidence for chaining in multiple drug abuse, and in the absence of a withdrawal syndrome there could be no secondary negative reinforcement.

Mellow Yellow. As discussed earlier, it appears that the only reinforcements maintaining banana-smoking are secondary positive and unrelated to drug effects.

Different Treatments Affect Different Reinforcements

Table 1 points up the seriousness of narcotic abuse—all types of reinforcement may help to maintain the behavior. The self-administration of no other drug class is reinforced in so many ways. Since various treatments are addressed to different reinforcers, treatment planning depends first upon evaluating which reinforcers are significant in a particular case, and then applying the appropriate treatment. Let us use narcotic abuse as an

example of the effects of various treatments on different reinforcers.

Methadone maintenance eliminates primary positive reinforcement. Methadone, a long-acting narcotic, is given in such high doses that the user becomes tolerant to the common street-dose of heroin. This tolerance, by blocking the "narcotic high" (the primary positive reinforcement), permits *extinction* of heroin-administration behavior through nonreinforcement: repeated injections produce no reinforcing "high," and the behavior gradually ceases. By contrast, disulfiram (Antabuse) *punishes* alcohol self-administration, producing physical illness after drinking. Extinction by nonreinforcement is generally more successful than punishment in eliminating a habit, and indeed methadone appears to be more effective in reducing heroin abuse than is disulfiram in reducing alcohol abuse. By eliminating primary positive reinforcement, methadone maintenance also deconditions chaining, for only continued association with a primary reinforcer maintains reinforcing properties in the elements of the chain.

Methadone maintenance also interferes with primary negative reinforcement. Through tolerance it blocks the blotto effect of heroin in street doses; neither is heroin needed any longer to terminate withdrawal, because methadone is sufficiently long-acting that, taken once daily, it prevents withdrawal.

Since methadone maintenance prevents physiological withdrawal, it would help decondition the conditioned withdrawal state that permits secondary negative reinforcement. Users may undergo withdrawal in certain places, or with certain people, so frequently that the mere appearance of those places or people begins to precipitate withdrawal through Pavlovian conditioning. As long as the user stays on methadone, true physiological withdrawal would never again be paired with the precipitating stimuli, gradually deconditioning their association to withdrawal. Thus methadone maintenance removes the opportunity for secondary negative reinforcement, which accrues when a conditioned withdrawal state is terminated by drug-taking.

As noted above certain users may be able to obtain more social reinforcement through the narcotics' suspected ability to reduce aggressiveness. Assumedly, methadone would also have this property, which might provide some reinforcement for patients to continue on methadone.

Methadone maintenance attacks so many reinforcers for narcotic abuse that in most cases no other treatment is needed,[33-35] and similar blockers for other drug classes are being sought.[36] Dole and Nyswander believe that methadone's success may indicate a metabolic origin in addiction,[37] but the drug's interference with the reinforcement for narcotic abuse argues as strongly for a behavioristic basis to the disorder.

Detoxification (the withdraw-and-dry-out treatment) only affects primary negative reinforcement. The user who is forcibly withdrawn from heroin will no longer have withdrawal symptoms, the termination of which could reinforce drug use. But high relapse rates after detoxification demonstrate the importance of other reinforcers to which the treatment is not addressed.

Psychotherapy might aim at secondary positive reinforcers by examining the user's typical ways of relating to people, how drug-induced changes in his behavior obtain reinforcements for him, and why he finds reinforcement in association with rebellious groups. Psychotherapy might examine how the user came to doubt his capacity to achieve reinforcements other than drugs and might be used to demonstrate to him, through the relationship with the therapist, that he can obtain other major reinforcers. Experience, however, has shown that traditional psychotherapy alone for drug abuse tends to be unsuccessful, probably because it leaves untouched so many other important reinforcers.

Clinicians commonly apply one or another of the above treatments, saying of treatment failures, "He wasn't motivated to change." Careful consideration of the multiple reinforcers involved might indicate the motivation for a particular patient to continue his drug abuse, leading to a more comprehensive program of therapy tailored to the needs of the individual addict. For some, this might mean only hospitalization and withdrawal; for most, perhaps, methadone maintenance; and for some others, methadone maintenance plus psychotherapy. The key to this kind of treatment planning lies in a detailed analysis of what reinforcers most actively maintain the self-administration habit in each patient.

Summary

Drug-abuse behavior may be maintained by reinforcement of the following types: (1) primary positive; (2) primary negative (a) by termination of withdrawal; (b) by reducing attention to, or discrimination of, aversive stimuli; (3) secondary positive (a) social and unrelated to drug effects;

(b) social and related to drug effects; (c) chaining; and (4) secondary negative.

Which type of reinforcement functions to maintain drug-abuse behavior appears to depend partly upon the class of drugs employed. The following drug classes are discussed in terms of the reinforcers maintaining their abuse: narcotics, stimulants, sedative-hypnotics and alcohol, hallucinogens and marihuana, and placebo.

Different treatment modalities are aimed at different types of reinforcement. Using narcotic abuse as an example, methadone maintenance, detoxification, and traditional psychotherapy are discussed in terms of their effect on each of the types of reinforcement maintaining the drug habit.

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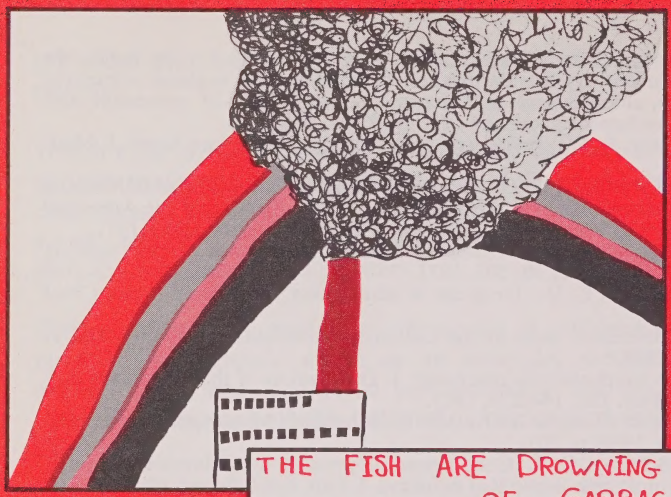

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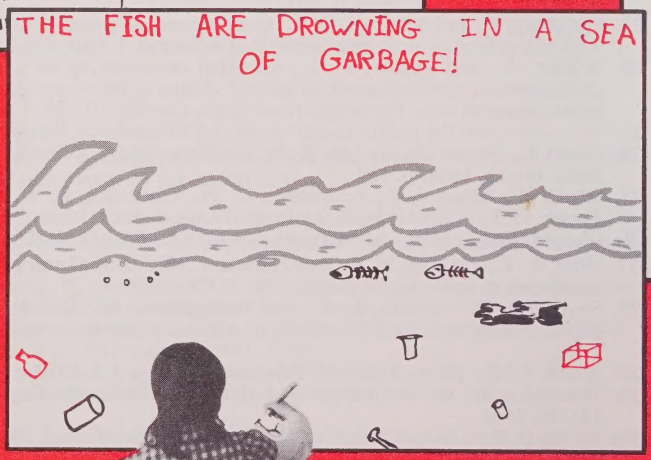
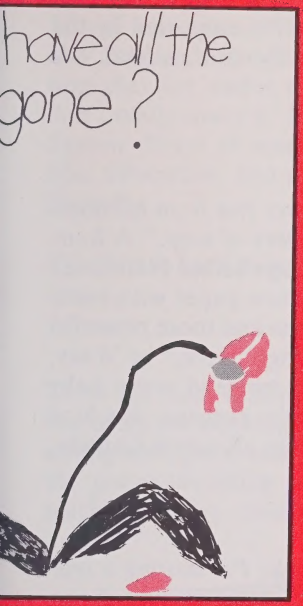


2.

Student posters courtesy of Pollution Probe.

1. Helena Friesen, Age 12.
2. Sheree Tam, Age 13.
3. Lorelei Friesen, Age 7.



How to change the world with words and pictures

by Laird O'Brien

"*I like my job but I did feel rotten when my five-year-old son said, 'Daddy, Tommy Larkin told me that if you're a cop, you're a pig.'*" The man is talking on television, wearing casual clothes, and sitting in his modest suburban home. He is Robert O'Neill, a New York City policeman and

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Mr. O'Brien is Vice-President and Creative Director with McCann-Erickson Advertising of Canada Ltd. in Toronto. He has acted as a communications consultant to a number of organizations and has contributed articles to Canadian and American publications.

one of the "stars" in a series of television commercials designed to change the attitudes of New Yorkers towards their law enforcement community. The theme: Be fair to cops—you never know when you might need one. The campaign was suggested by Mayor Lindsay in 1970, supported by the Patrolmen's Benevolent Association, and created by professional advertising people.[1]

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"*Five cents sends them 25 glasses of milk . . . 10¢ saves two from blindness . . . 25¢ will buy a baby chick . . . $1.00 will buy 20 bars of soap.*" A four-year-old boy came home from nursery school a few days before Halloween with an orange UNICEF box and a small slip of yellow paper with some words on it. His mother read the simple message to him and those powerful words made the UNICEF box a big part of his evening. "Here," he 'd say, as he thrust the box forward at each door, "help me send some baby chicks." The right words reproduced on a simple copying machine dramatized a goal and made it meaningful for children all across Canada.

•

Dick Cavett: "A lot of people have been wondering why I'm hosting a television show on venereal disease. Well, actually I wasn't WNET's first choice. They asked George Plimpton to go out and get a dose of clap and then come back and tell of his experiences. George said no and blew the show. They asked Senator Muskie to do it—they're still waiting for him to answer. Senator Humphrey answered—but he wasn't even asked. So they asked me—their thirty-fifth choice.

"*I thought you might like to know what* VD Blues *is all about—might even be curious about why I've decided to do this show. It hardly seems necessary at this stage to talk about the epidemic of gonorrhea in this country. Two-and-a-half million cases last year. A startling increase in the number of cases of syphilis . . . . So we set out to broadcast some straight information. The target audience of this show is young. Younger than some of you would like to admit. You reach the young by being cool, not by moralizing, by telling them the facts and even by poking fun at the most esteemed stereotypes of their elders. You reach the young through music—rock and ballads that tell an honest story.*

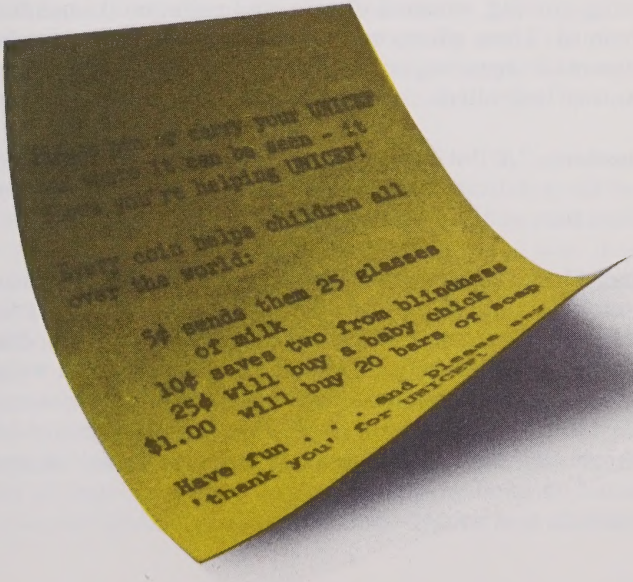
"*The problem was to design a show that filled those requirements. A show—not a program.*"

This is a portion of Dick Cavett's introduction to a closed-circuit preview of *VD Blues*, a one-hour public TV program that started with the assumption that for useful and important information, preachy documentaries don't really make it. *VD Blues* set out to be educational entertainment—a *Sesame Street* of sexual education—with skits by Jules Feiffer, songs by Shel Silverstein, and a rock group called Doctor Hook and the Medicine Show.[2]

VD Blues is hard to ignore.

•

These are three striking examples of how communications people and their resources are working to solve current social problems. Skills that have been selling toothpaste and cars are now presenting a case for co-operating with the police, avoiding drugs, or repealing a law. Simple, clear writing is reaching young children and helping them to understand the needs of



people in other countries. Sophisticated techniques of the entertainment industry are persuading us to watch and learn about a frightening medical problem.

Yet in spite of all this, we have just barely scratched the surface.

The 1970's offer an excellent opportunity to apply the resources of advertising, marketing, and journalism to these problems. The basic requirements are enthusiasm and interest, an understanding of fundamental principles, and a good deal of common sense. This article offers a guide to social communication in the hope that groups and individuals who have something worthwhile to say, will be able to do it more clearly and persuasively.

Three Approaches to Social-change Communication

In broad terms, every social communications program has a common feature—it is non-profit. The goal is to bring about a change in our way of life. One approach is *education.*

Films, articles, advertisements, speeches, and booklets all attempt to change attitudes and behavior in areas of exercise, non-medical use of drugs, drinking, driving, venereal disease, and pollution (to mention only the most obvious). These efforts may be sponsored by industries, government departments or agencies, interest groups, associations, and occasionally, by concerned individuals.

The advertisement, "A Pot Primer for Parents," was a labor of love for employees of Grey Advertising Ltd. who felt strongly about the subject. They gave their time and talent; *Time* magazine gave the space.

The American Medical Association has recently run a series of advertisements, one of which features a large illustration of Henry VIII with the headline: "How to kill yourself." The text explains how to "eat, drink and be merry," with suggested foods and activities to quickly add weight and heart strain.[3] Provocative communication!

Pollution Probe has carried out an extensive educational campaign in Canada—including hand-written letters and posters painted by children. It's the enthusiasm that counts—not the money behind it!

A second approach to social change is *protest or issue communication*. In the simplest form it expresses dissent—opposition to the war in Viet Nam, a political candidate, or the treatment of stray dogs. Going one step further, issue communication tackles a specific problem with the goal of shifting public opinion and bringing about a change in the laws—repeals, amendments, or new laws. The most outstanding success in this field is the advertisement which appeared in New York newspapers on behalf of *Citizens Against Rats*. It was prepared by Bert Steinhauser of Doyle Dane Bernbach Inc. (with text by Charles Koelewe) and supported by a quickly aroused public. President Johnson acknowledged that this advertisement definitely influenced Congress to pass rat control legislation.

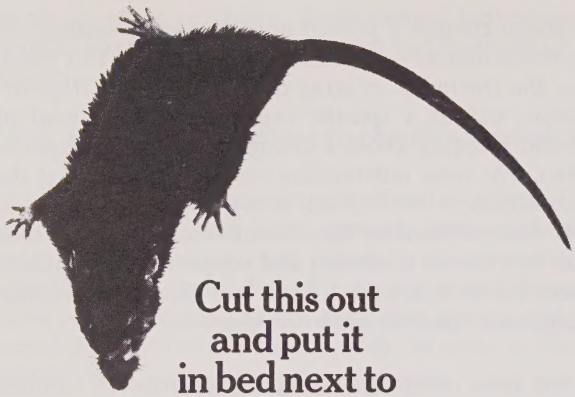
The first ingredient in any issue campaign is anger, supported by rational arguments recommending a plan of action. Most issue campaigns not only ask for names and people to help, but also for money to extend the fight. Two campaigns are underway in Ontario now—one to save Toronto's Union Station from the wreckers, the other—*People or Planes*—is fighting to block the proposed airport north-east of Toronto. We can expect more action in this field as groups and communities discover the power of print and film media to bring about change.

The third form of communication is *fund-raising*. Most charitable organizations have an annual drive to raise the money needed to carry on in the coming year. The quality of these campaigns tends to range from disasterous to mediocre—for reasons which we shall come to shortly.

Fund-raising *can* be imaginative and effective. In one issue of *Time*, readers came upon a startling invitation: "How you can build a small park in Harlem." Squashed between two ugly tenements was a tiny, rubbled lot. The people at Young & Rubicam International Inc., who thought of the idea, wanted $7,000 to turn it into a park for neighborhood children. In a few weeks they had collected $29,000—plus offers of help from architects, construction firms and a 10-year-old boy who wanted to plant a tree.

Unfortunately a good deal—perhaps the majority—of educational, issue, and fund-raising programs suffer from the "too many" problem: too many objectives, too many committees, too many blue pencils, too many chiefs.

Good communication is clear and simple. *The basic goal of any plan is to*



Cut this out and put it in bed next to your child.

Go ahead. Try it, if you have the stomach for it. Lay it next to your baby and let him play with it.

You can't?

Then you have a lot more imagination than some of the members of our House of Representatives.

They don't even think real rats are anything to worry about.

That's why they laughed when they killed a bill that would have given $40 million to our cities and states to help them pay for rat-control programs in our slums.

But the real shame is that they didn't even vote on the bill itself. They only voted on a rule that asked them to consider it.

And they voted 207 to 176 against it.

They had their reasons, of course. Economy was the most quoted one. They felt this country couldn't afford $40 million.

Yet they were told that rats cause us an estimated $900 million worth of damage each year.

Does that make economic sense?

They were also told that rats have killed more humans than all the generals in history put together. And that thousands of our children are bitten by rats each year—some killed or disfigured.

Does that make social sense? Especially when we're already spending Federal money to protect livestock and grains from rats?

Maybe those men have never lived in broken down tenements where you could hear the rats scurrying inside the walls at night.

Maybe they've never seen a rat dash across their kitchen floor and into some hole under the sink when a light was snapped on.

Maybe. But then a lot of us have been that lucky. Does that excuse our ignoring those who haven't?

There are 90 million rats in this country. Where do you think they go when their slum homes are torn down?

They go into our finest hotels and restaurants; into modern apartment buildings, cellars, garages. They go everywhere and anywhere.

And they breed more rats.

That's why when our congressmen vote against getting rid of rats, they're voting against all of us. Not just the poor people. But all of us.

Fortunately, there's still hope.

The vote was 207 to 176. That means if we can get just 16 men to change their votes when the bill comes up again, the tally will be 192 to 191—enough to pass it.

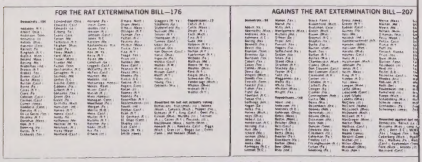
Below is a list of congressmen and how they voted.

If yours voted for the bill, write him and let him know you support him and anything he can do to change the minds of those who voted against it.

If yours voted against the bill, write and let him know you want him to change his vote.

Write to: Honorable
House of Representatives, Washington, D.C.

It's time we stopped giving rats equal rights with people.



FOR THE RAT EXTERMINATION BILL—176

AGAINST THE RAT EXTERMINATION BILL—207

A message from some citizens who think Congress made a mistake.

This ad by Doyle Dane Bernbach In influenced Congre to pass rat control legislation.

Pot Primer for Parents.

Know enough basic facts about marihuana to talk to your son and daughter about it.

As a parent, you're concerned. You read that college, high school, even junior high students smoke marihuana. What about your own son or daughter? Have they tried it? Would they tell you? Do you just keep quiet and hope—do you talk?

Your youngsters may joke about grass, tea, joints, roach, head—words that mean something different to you. They seem to know more about drugs than you do—that's their side of the generation gap. But not all their "facts" may be facts.

Can you talk frankly to your child about pot?

As frankly as about other important matters, with tact and mutual respect. It may be easier to start by discussing marihuana experiences he's heard of from his friends. You won't want to come across as accusing or angry—it's as risky to assume he does "turn on" as to assume he doesn't. Keep it simple, direct. And make sure your concern for him, and what happens to him, shows.

Who uses pot, and why?

More boys than girls. Girls are likelier to try if their boyfriends smoke it. A majority of young people have not tried it, and have enough self-assurance to resist trying it. A number have tried it once or twice out of curiosity or boredom. A smaller number "turn on" just on weekends. A small percentage become "heads"—their lives centered around marihuana or other drugs, with very little interest in anything else.

What proven facts about marihuana can you tell him?

1. Individuals react very differently to this drug, which is why you hear stories of extreme reactions, and stories of no reactions.

2. Reactions vary according to setting, expectation, pattern of use, and the strength of the marihuana (which varies greatly).

3. Because of all these variables, little has been proven conclusively about specific effects of marihuana on the mind and body. This does not mean there are no ill effects, but that they cannot be catalogued and predicted exactly.

4. Involvement with this drug during the years while the young personality is finding and shaping itself, and learning how to deal with life's problems, is an intangible danger to try to measure, but of deep importance. That's a hard fact for the young to understand.

5. The possession of marihuana is illegal under local laws. In many states, it is a felony, equivalent to the possession of heroin. The laws provide severe penalties. Even being in the company of someone who possesses marihuana may make your child liable for arrest.

Easy answers to hard questions.

There aren't any. If your children ask, "What about parents' drinking and smoking?" a partial answer is that *your* body and personality have matured. Once anyone becomes dependent on any drug, including alcohol and cigarettes, it can be difficult to stop. Even if you're convinced they're harmful.

"Why do adults say marihuana leads to stronger drugs when that hasn't happened to my friends?" A teenager's experience is limited, it has happened. While marihuana itself does not lead to other drug use, association with "dealers" and drug users may be the first step to experimenting with LSD, speed and even heroin. And these drugs are far more than a stronger form of pot.

"What about the people who say pot is OK?" To be honest, scientists still don't know everything about the specific effects of marihuana. But certainly, the "authorities" your children quote, know even less. No expert is saying today that pot should be legal.

It boils down to this. Marihuana is a risk nobody has to take. Least of all somebody you care about.

For more detailed facts about marihuana and other drugs, write for free booklets to:
National Institute of Mental Health
Box 1080, Washington, D.C. 20013

Employees of Grey Advertising Ltd. felt strongly about the subject. They prepared this ad; Time *magazine gave the space.*

inform and persuade the right people at the lowest practical cost. Here—as a guide to approaching any communications problem, working with any budget, for education or protest or fund-raising, in any community from 500 to 5 million, with any materials (posters, banners, advertisements, films, booklets, newsletters, speeches)—are some basic principles of effective communication.

15 Ways to Make Your Communications More Effective

1. Decide what you're trying to do. Is your goal to change the current views on a subject? Do you want 400 people to turn out on the steps of the high school tomorrow at 10 a.m.? Do you want them to send a letter or money or both somewhere? Do you want people to think you are a terrific, involved person? (Don't laugh: it happens too often.)

Pin your objective down in a sentence or two, and be sure that it is practical and workable. To attempt to "get the kids off the street" is a long-range goal, not a specific objective. To find 12 volunteers who will help you organize a drop-in centre is a reasonable objective to tackle.

To say that you want to "end the unemployment problem" is a grand dream; to persuade 100,000 Canadians to write letters to their Members of Parliament urging action on unemployment is a realistic objective.

2. Find a strategy to achieve your objective. Find the compelling *reason* why people should do what you want them to. The strategy or "rationale" is crucial; think it through carefully. Study all background information—often available through government departments, associations, and other interest groups. Find out what people are thinking *now*, before you launch your program. This doesn't have to be an elaborate, expensive research project; talk to people over coffee, ask them questions, try out ideas, and see how they react.

Example: If your objective is to find 12 volunteers to develop a drop-in centre, your strategy could go in a number of different directions. (1) You could stress the *need* for such centres, the dangers if more aren't developed. (2) You could talk about the tremendous *success* of a similar centre in the community. (3) You could use kids themselves to present the idea at a public meeting or by letter. (4) You could call 12 organizations in the community and ask each to present you with one volunteer worker.

3. Talk to a specific audience. It is foolhardy and expensive to aim your message like a shotgun. One step in selecting a strategy is defining the group of people who are most likely to be persuaded, most likely to follow the route you are advocating. Examples: If you're dealing with the question of unemployment, your most enthusiastic supporters will be those who are unemployed. If you are protesting the treatment of stray dogs, your most enthusiastic supporters will be animal lovers, families with young children, and families with dogs.

Aim for specific audiences: families with teenagers, pet owners, home-owners, people living in a clearly defined area of the community, downtown merchants, teenagers, people who drink, people with incomes over $10,000. These are just a few of the many economic and social market segments.

4. Above all, be accurate and clear. It costs money to print posters; too often they invite people to a rally on Tuesday the 17th when the 17th happens to be a Wednesday. There can be no excuse for wrong dates, wrong places, wrong speakers. Double-check your facts.

Before any message can be persuasive it must be clear. Be sure there is no doubt about what you are saying. Are you asking for volunteers or letters or a meeting or praise? Make it crystal clear. *The greatest sin is confusion.* If in doubt show your material in rough form to a few strangers and ask them what it says.

5. Match your media to the need. You are striving to make the greatest impact at the lowest cost. In small communities you can make use of local newspapers, radio stations, notice boards in schools and churches and stores. Volunteers working by telephone, with an informative and appealing message, can often be extremely effective.

In large cities you have access to mass media. They will sometimes donate space or time. You should also take a close look at the services and costs of direct-mail houses, ethnic papers, suburban papers, and cable TV stations.

6. If you are communicating with young people, don't try to be "hip" or talk their language. By the time you read this, hip is probably not. The youth culture can change overnight. To quote Dick Cavett: "*You reach the young by being cool, not by moralizing, by telling them the facts . . . .*" They are

hard-headed and sceptical because they have grown up in a period of mass television merchandising and cultural turmoil. They tend to reject advertising and editorial journalism that is pompous, exaggerated, hero-worshipping and flag-waving. Yet to meet *their* own objectives they accept and use tools of information and persuasion: placards, buttons, leaflets, books, documentary films. Talk to them honestly and directly. Give them facts, the well-founded views of people they can respect, and then let them make up their own minds.

7. *If you are asking people for money, tell them exactly how you plan to spend it.* Don't say, "We want to purchase much-needed recreational and learning equipment for the children." Pens? Balloons? Desks? That is neither clear nor involving. Say "We want to buy an 8 mm. movie camera and—if we're lucky—a small tape recorder for drama rehearsals." Notice the power of specific facts in the UNICEF message: "*5¢ will send them 25 glasses of milk.*" Listen to the words in the Harlem advertisement: "*The vacant lot shown below is on West 115th Street in New York City's Harlem. One twelfth of an acre of broken glass, trash and rats. But within a few weeks it could become a place for kids to play. With swings, slides, climbing bars, benches and maybe some trees . . . . It'll take about $7,000 . . . .*" People are understandably reluctant to part with their money for any reason; persuade them with words and pictures that paint strong, appealing pictures.

8. *If you are asking people for money, make it easy for them to send it.* Enclose a blank cheque form with a letter or brochure mailed to the home. Use a coupon in newspapers or magazines. Again, the Harlem advertisement is a good example; the reader can take immediate action. Television and radio both lack a method of easy payment. Be sure to tell people if their contributions are tax deductible.

9. *Know the basic elements of persuasion.* The overly-simple but classic summary of persuasion is this: (1) attract attention, (2) promise a reward, (3) explain how it is possible, (4) ask for action. Whether you are writing a letter to call a meeting of 15 people or writing an advertisement for an audience of 3 million, the same steps apply: objectives, strategy, careful execution with words and graphics.

Some don'ts: Don't rely on scare tactics ("This could happen to you . . ."), the Jones approach ("All your neighbors are helping out . . ."), or irrelevant

attention-getting devices. Avoid being cute, clever, or witty—unless you happen to be Woody Allen. The chances are excellent that you will lay an egg.

Choose your illustrations and photographs to *add* to the power of the communication. Avoid abstract designs, out-of-focus shots, and typefaces that are ornate and difficult to read.

Arrange your words and pictures in a format that is above all easy-to-grasp. Study the layout simplicity in current magazines and documentary films. Notice the examples included in these pages: the typography is simple, the illustrations are dramatic, the overall designs are powerful—yet easy to read.

10. Say it loud and clear—and often! Create one excellent poster or letter or advertisement and then expose it in as many ways and places as possible. Repeat it over and over again. When you are tired of looking at it most of your audience still hasn't seen it. Look for ways to get added exposure. You can usually acquire extra proofs of an advertisement from the printer for little cost. They make excellent mailings, posters for windows, handouts on street corners. A direct mail letter can be reproduced by a simple copying machine and distributed in many ways.

Stick to one idea. If your theme is, "*Alcohol and cars don't mix*," use it consistently on letterheads, signs, posters, invitations, and advertisements. You gain awareness by consistently exposing one strong idea.

11. When you have news, tell the world. Television stations, radio stations, and newspapers live on news. They seek it—and not just the bad. When good things happen—for example, you raise more money than expected for the new swimming pool at the school—tell the press. It's an effective way to report results, gain publicity, and acknowledge the help of many people. If you have a speaker arriving in town, phone the news editors of papers and

This idea from Young & Rubicam International
raised $29,000 plus help from archite
and builders in just a few wee

How you can build a small park in Harlem.

The vacant lot shown below is on
'est 115th Street in New York City's
arlem.

One-twelfth of an acre of broken
ass, trash and rats.

But within a few weeks, it could be-
me a place for kids to play. With
vings, slides, climbing bars, benches
d maybe some trees.

Members of the 115th Street Better
ock Organization have planned the
rk. But construction can't begin un-
money is raised.

It'll take about $7000.

If you can help, just send your tax
ductible gift along with the coupon.
doesn't have to be a huge amount;
is little park can be built with nickels.

No matter what you give, your name will go on the park's plaque.

And, with luck, this ad might collect more than $7000. Because there's a great spot over on East 117th Street for a second little park.

Mail to: Box 3887,
Grand Central P.O., N.Y., N.Y. 10017

Gentlemen: I want to help build a small park in Harlem. Enclosed is my donation of $_____. (Checks payable to "Mayor's Commission on Youth and Physical Fitness.")

Name_____

Address_____

City & State_____ Zip_____

stations. Try to arrange interviews; remember, they need news and are more than willing to co-operate if you do some digging and organizing. Editorial press coverage of an event or new development is an important way of communicating with the public. Make every effort to work closely with press people.

Radio and television stations will also, at times, make "public service announcements" free of charge. Write to the length they suggest (usually 30 or 60 seconds), and be sure to give them interesting, typed scripts. If you plan ahead and ask politely you can receive a great deal of help.

12. Watch your pennies. No amount of money spent on fancy production will save a poor piece of communication. At the same time, fortunately, a good idea usually does not require expensive photography and four-color printing to be effective. If you follow the earlier steps, you will find that clear, dramatic material can be developed for surprisingly little money.

13. Seek out the experts and specialists. Few of us would attempt to extract a tooth or draw up a complicated legal document. Why is it, then, that just about everybody feels that he or she is an expert in the field of verbal and visual communication?

Few people are experts in communication.

Fortunately, those who are—writers, photographers, designers, artists, researchers, media planners—are also concerned with current problems. *Ask for their help!* You will be surprised just how quickly they will come to your side—and how quickly they will prove that communications is *not* everybody's business. Announcers, musicians, printers, and newspaper people can often give you guidance and help as well. But again, you have to ask them.

14. Avoid committees. One good person in control is far better than five good people with nobody in control. Try to keep the lines of internal communication and approval of plans as direct and simple as possible.

If you are using skilled communications people from outside your organization, work closely with them. Give them the opportunity to explore the problem and look at it from several viewpoints. Don't overwhelm them with irrelevant internal material or technical detail. To avoid inaccuracies

it is often helpful if an expert in the field puts his thoughts down on paper as an initial guide. From there on give them an open door, fast answers to all questions, and encouragement.

15. Look to business and industry for help. Business in North America is awakening to the thought that it is more and more desirable—no, necessary—to be involved with and talking to the public about the real problems of our society. A company's social responsibility and long-term profits are closely related; people today expect the skills and resources of business to play a role in solving social problems. Xerox Corporation has been active in this area. Other companies are becoming increasingly active. For example, the cost of the Addiction Research Foundation's film, *A Firm Hand*, was shared by IBM Canada Ltd., Gulf Oil Canada Limited, and the Government of Ontario. The 3M Company supported the production of *VD Blues*.

In the years just ahead, look to business and industry—at all levels—to develop their own programs and also to aid existing organizations. Approach them with your plans and ideas; all they can do is say no. And the chances of that are dropping day-by-day.

ACKNOWLEDGEMENTS
The author would like to thank Young & Rubicam International Inc., Doyle Dane Bernbach Inc., and Grey Advertising Ltd. for permission to reproduce material.

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TRAPPED ADMINISTRATOR

and evaluation of social and community development programs

by Reginald G. Smart

The human condition is under continual assault by myriads of new social and educational programs. We have recently seen citizens exposed to job retraining, poverty alleviation, model cities, and establishment of various compensatory education efforts such as Head Start, Upward Bound, Sesame Street, and the like. Drug-education programs for parents and young people, community development efforts to create awareness of drug users and their need for treatment, are part of this effort. Such programs are intended to provide some social betterment for large sections of the population and to create definable improvements by complex and long-term processes.

The problems tackled are large and often ill-defined—e.g., "poverty," "the quality of life," attitudes toward drug use, or improved communication between teachers and students. Such large objectives rarely yield to easy technological fixes, although Weinberg (1967) suggested that because rioting occurs at the height of summer it could be substantially reduced by giving air conditioning to all ghetto dwellers. Because the number of social programs proposed is always far greater than can be implemented, we ought to search for the best solutions. Unfortunately, as Campbell noted (1970), "specific reforms are advocated as though they were certain to be successful."

The continual need to see whether costly social programs are achieving their aims can be handled in several ways. We can go on assuming that our programs are effective and valuable (perhaps because we put them there, and anything so large couldn't possibly be useless). Increasingly, the high cost of social betterment is militating against this approach. Many large-scale social and educational programs in the U.S. (Head Start, Upward Bound) have received careful evaluation. Now that these studies have been made, we know far more about the various models which can be used, how likely they are to succeed, and what problems they entail. It is also known that most ameliorative programs have no interpretable evaluation (Hyman and Wright, 1967).

Evaluation studies are never easy or short-term. Few please both the evaluator and those evaluated. Some of the best models involve require-

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Dr. Smart is Associate Research Director (Evaluation Studies) at the Addiction Research Foundation in Toronto.

ments from administrators that are difficult to accept. These are experimental models—they are complex but by far the most powerful and most disliked by trapped administrators. However, by re-educating administrators about evaluation studies and how they are performed, many can be released from entrapment. This article, therefore, looks at the various problems involved in evaluation of social programs, the different models of evaluation studies, and how the trapped administrator can be freed.

Problems in Evaluation of Social Programs

"Do something," "do something good" has been said to be the aim of the present social-welfare system (Banfield, 1970). Given such vague aims it is little wonder that no one knows whether "Model Cities," "War on Poverty," and various "Great Society" programs have ever succeeded. Similar vague aims can be seen in drug-education programs. It is rarely clear whether they are supposed to provide the student with facts, make his drug attitudes less permissive, prevent his drug use, or merely help him make a wise decision. None of the major drug-education programs in Ontario have ever been evaluated in any empirical manner. Almost none of the drug-education programs anywhere have been evaluated; partly because no one is sure what these programs are trying to accomplish (Richards, 1971).

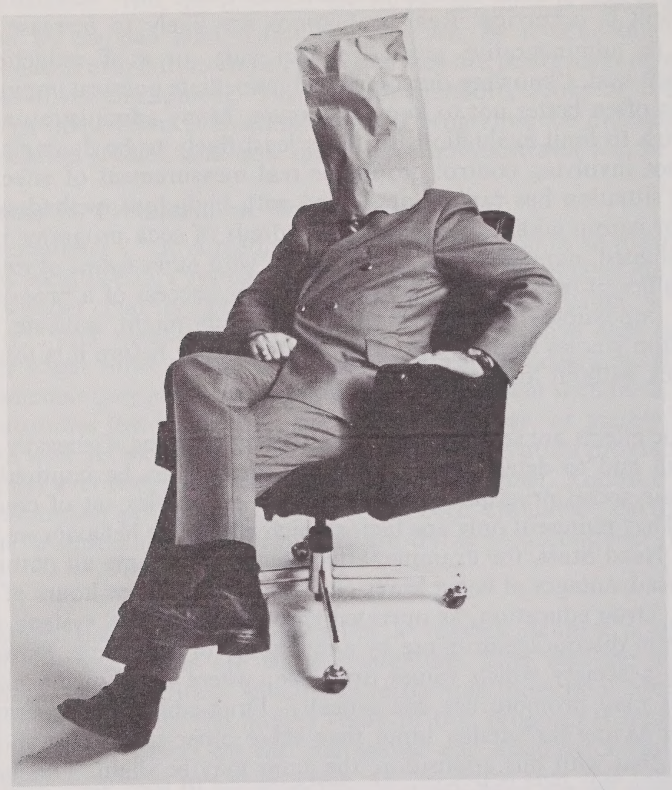
Sometimes the evaluator approaches a vaguely defined program and decides on what aims are worth evaluating. This was the case in the evaluation of Head Start, which was to provide pre-school education for ghetto-area children. The largest study of this program (Circirelli *et al.*, 1969) examined effects on the intelligence and abilities of children who were (and were not) in the program. It concluded that this billion-dollar program, involving millions of students, had almost no effects which could be seen in the children one to three years later. Violent emotional criticism followed this disclosure. Many critics maintained that the wrong objectives were examined and that the effects on health, nutrition, and family stability were more important. If the results had been positive, or if less money had been spent, the criticisms probably would never have been heard. This study also illustrates that large-scale programs may have many vague objectives. When a few are selected for evaluation and the results are found wanting, the study may not receive an adequate hearing.

This raises a further problem with evaluation studies. Most people seek positive, not negative (or no) effects. Those who propose and operate

programs are too often convinced of their program's value beforehand. Naturally, administrators wish to claim that under *their* leadership social betterment is occurring. Real evaluations are likely to increase vulnerability to administrative attack, budget cuts, or staff reductions. As Campbell said, "knowing outcomes had immediate political implications" and it is often better not to know outcomes. Many administrators, therefore, wish to limit evaluations to those least likely to be damaging—e.g., those not involving control groups or real measurement of effects. This type of situation has rapidly developed with high-dose methadone treatment for heroin addicts. Despite the hundreds of such programs initiated and evaluated, none involved a comparison with other forms of treatment. Once sufficient resources are committed to the success of a program, it is almost impossible to tolerate anything which might indicate failure. Evaluation studies should, therefore, be done early before it is too late to turn back without losing face.

Dramatic effects are seldom possible in social programs. Generally, effects are small and to detect them sensitive methods may be required. Most large-scale social programs are operating in a complex set of competing events. They represent only one factor which affects the behavior we wish to change. Head Start, for example, attempted to overcome all natural and social disadvantages of being lower-class by offering a few hours of school per day. Drug education, as operated through the school system, usually attempts to discourage drug use by a few hours of class time. However, it exists in a society which values drug use; where mass media and peer pressures may promote use energetically. Drug-education programs are probably having far smaller input than these other sources. It should be expected that with this opposition, the gains may be slight. This problem is magnified by the tendency to promise program effects far greater than could be expected even under the most favorable conditions—e.g., Model Cities, Head Start, War on Poverty suggest far too much.

Because evaluation studies have such a short history, it is difficult to derive valid principles from it. Large numbers of social programs from the 20's and 30's have not been well studied—e.g., the New Deal programs and those of the so-called "great experiment," national prohibition. Moynihan (1969) noted that when the Great Society legislation of the 60's was planned a search was made for evaluations of the Roosevelt era, Job Corps, CCC, WPA, etc. but none were found. Hence, essentially the same unproven theories and concepts were re-applied at enormous cost.



". . . it is often better not to know outcomes."

The same problems occur in understanding the effects of prohibition on drinking, drunkenness, and crime. Limiting alcohol consumption is again being discussed as a preventive measure (e.g., De Lint and Schmidt, 1971). However, only the vaguest information is available as to the real effects of prohibition on social life as opposed to other events at the same time. It is agreed that liver cirrhosis did decrease, but the effects on normal drinking and social life are not clearly known. What this suggests, then, is that careful evaluations ought to be started *now* if we are to build up sufficient knowledge for our social and policy decisions of the future.

Types of Evaluation Studies

There are many ways of undertaking evaluation studies. Campbell described 20 such methods, but these could be reduced to a few general types. Two basic kinds are: (1) policy analysis including cost-benefit analysis; and (2) outcome analyses, both pre-experimental and experimental in design. I will argue here that *the best and most relevant models for evaluation studies are outcome analyses with an experimental design.*

1. Policy Analysis

Rossi and Williams (1972) described policy analysis as "a policy-oriented approach, method, and collection of techniques of synthesizing available information including the results of research: (a) to specify alternative policy and program choices and preferred alternatives in comparable, predicted qualitative and quantitative cost/benefit type terms as a format for decision-making; (b) to assess organizational goals in terms of value inputs . . . and (c) to determine needed additional information in support of policy analysis as a guide for future decisions concerning analytical and research activities." Policy analysis may involve the use of research in decision-making, but it is not research in itself. It does *not* produce new knowledge. It is a method of decision-making using the facts, data, and hypotheses that are available at a certain time. Because actual outcome data are not known but only predicted, policy analysis is most appropriate in making decisions about which programs to initiate; it is less useful when deciding which programs to continue.

Cost-benefit Analysis. Recently, cost-benefit analyses (C-B) have come into vogue in decision-making about social policy. They appear to be deceptively simple to carry out. Briefly, C-B analysis involves a method of making rational decisions from a group of alternative solutions. *The anticipated costs* of a program are balanced against its *anticipated benefits.* We ought

to be able to say, then, which program gives us the best (or acceptable) result at the lowest cost.

Suppose, as a recent example, that social policy about arresting publicly intoxicated persons is considered. They can, theoretically, be arrested and detained in jail, taken to hospitals for drying out, taken to detoxication centres for drying out, or driven home by policemen to fend for themselves. The costs of these procedures can be roughly estimated. What can almost never be anticipated (without study) is what the benefits will be. If we choose only one—for example, getting drunks off the street—we have one cost-benefit ratio. However, if drunks are in hospitals or detox centres there may be fewer suicides than if they go home or to jail. There may also be a better chance of getting problem drinkers into treatment if they go to detox centres.

A major problem with this type of analysis is knowing how wide to cast the net of possible benefits, and whether to emphasize present or future benefits. It is not surprising, then, that Rossi and Williams (1972) found that cost-benefit analyses of complex social programs are never made. Not a single example of such a study could be found for inclusion in their book on evaluation. Another problem, of course, is that C-B analysis is not always relevant to social programs—some of which are defended on political or ideological groups rather than on cost-benefit. Suppose, for example, an impeccable study showed that bilingualism could best be achieved in the Federal civil service by having all French-speaking people become fluent in English. It is doubtful that present political realities would allow such a study to have any effect upon policy.

2. Outcome Analysis

So far I have discussed pre-research evaluation studies. Although valuable and interesting, they work with existing data and information. They are not concerned with developing new knowledge or with the measurement of outcomes. (Their use involves efforts to anticipate outcomes, not to determine them.) Realistic choices among social programs can only be made once we have some measurement of how they work and which of their objectives are achieved. I will now describe both pre-experimental and experimental methods. There can be no doubt that the most powerful of these are the experimental models: we need more administrators and evaluators who will initiate these types of study.

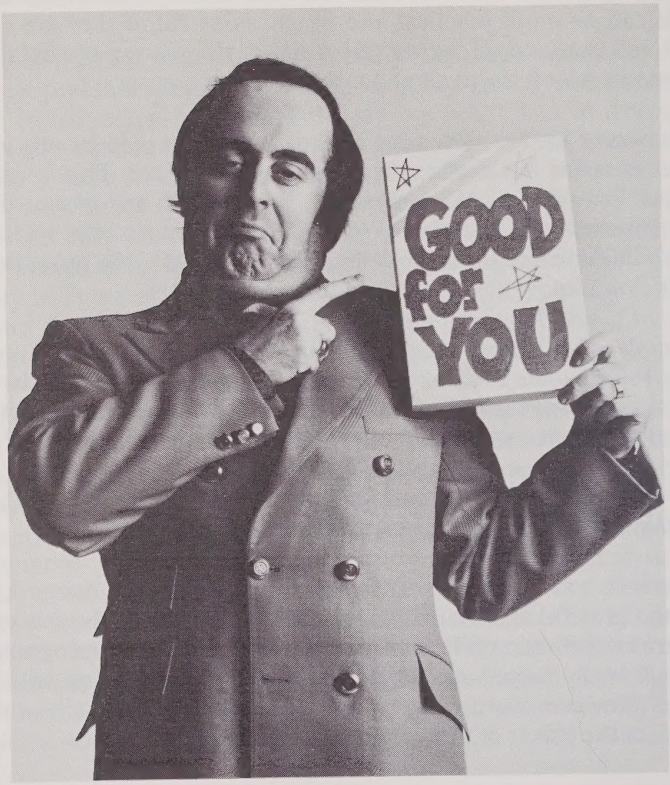
Pre-experimental Outcome Analyses. It is not always possible or economical to do experimental outcome analyses. At times "quasi-experimental" methods can be more practical and nearly as useful, if they are carefully planned and executed. However, the worst of the pre-experimental studies allows us to say nothing at all about the effects of a program.

POST-TEST ONLY DESIGN. The least adequate design would be one in which measurements are made after the program, not before. This is called the "post-test" only design. No comparison is made with any group which did not participate in the program. We, therefore, have no idea whether our group would have been just the same without, as with, the program. Also, we really don't know how they were doing beforehand.

An example of this approach would be the assertion that the new law allowing 18-year-olds to drink made young people buy alcoholic beverages more often and appear in bars more frequently. This sort of assertion has been made without any pretest information or control groups. We don't know if the law was responsible for these effects—i.e., whether young people were really drinking more because of the new law or whether they were drinking more because of many other factors as well.

THE GRATEFUL TESTIMONIAL APPROACH. Another post-test design has been called "the grateful testimonial" approach by Campbell. In this case, an administrator collects affidavits from those who had the program—e.g., "Doctor X really helped me." "I couldn't have gotten a job without the training." However warm they might make us feel, they tell us nothing useful about the effects of the program.

ONE GROUP PRETEST-POST-TEST DESIGN. A more adequate design is where one group is measured on some behavior, given the program or reform, and measured again. This is the one group pretest-post-test design. It allows us to say whether any changes occurred during the program; but without a control group, the program's effects remain uncertain. We are not sure whether the same changes wouldn't have occurred anyway. Let us return to the example of the new law: a study was made of alcohol use among Toronto high school students in 1970 and 1972. The results showed that users had increased from 60% to 70% and heavy users from 13% to 23%. However, this increase may have been caused by many social or cultural changes which occurred at the same time. We can't say that the new law definitely created the change: students may have merely been growing older.



"...too many social programs are launched with unjustifiable ballyhoo about their value."

THE QUASI-EXPERIMENTAL DESIGN. The best *pre-experimental* design is one in which there are relevant control groups. These groups are made up of people who do not participate in the program or who are in a different program. The control groups must be similar in all important characteristics to the experimental group. This may mean matching them for age, sex, social characteristics, or anything else which might be connected to the program. This design has been called quasi-experimental or "*ad-hoc.*"

The problem with this design is that people are not randomly assigned to the groups receiving the treatment, different treatment, or no treatment. It is frequently found that the control group is different from the experimental group. For example, the Head Start evaluation used as the control group children who started the program but did not complete it. A vast number of factors might have produced a superior non-Head Start group which could have obscured the effects of the program. For example, control-group children may have had less need for the program, they may have gone to better schools, or their parents may have had some pre-school education themselves. Without randomly assigning children to the Head Start and non-Head Start programs, we could never be sure that the two groups were similar enough to start with.

Experimental Designs. Nearly all proponents of evaluation studies agree that *the strongest and best design is an experimental one.* In this design, people are randomly assigned to the program and no-program groups. If a variety of programs are used, then people are randomly assigned to all programs. These are standard designs which are now used in all social and physical sciences. The main elements are that: (i) the people or elements to be studied are assigned to treatment groups and treated differently according to a plan; (ii) assignment is random; and (iii) measurements are collected to determine whether the treatments have any differential effects.

The intervention of random assignment chiefly differentiates experimental from pre-experimental designs. It makes experiments unbiased since people getting the various treatments, or programs, will turn out to be the same. It is superior to the matching employed in quasi-experimental designs because matching so rarely can be complete. We are always likely to forget to match for some important characteristic, thus making our comparison less useful.

If the experimental design is the best available, why is it not always used?

Experimental designs are almost never used in studying social and community programs. One reason is that they give us the most power to detect effects and we should remember that effects may be negative or zero. *They give administrators nowhere to hide if well carried out.*

Another problem surrounds randomization. Most program administrators are sure that they know who should get what program (or no program) even though real knowledge in the area may be totally lacking. "Randomizing people" sounds mechanical and unfeeling. However, designs can be established where no one is assigned to "no-treatment" groups only to different-treatment groups. One good arrangement is when a scarce resource can only be given to some applicants and not others—e.g., when the Salk vaccine was first available there were insufficient amounts for all children. Therefore, the most humane way of distributing it was randomly. This also allowed for a careful experimental study of the results. Randomization as a technique is really much fairer than personal judgment, since everyone has an equal chance of getting the best program. We have to keep in mind, too, that we are studying programs whose effects are *not known*, so denying them to people works no hardship on them. It is essential that we begin to use experimental designs in studying effects of social programs. Their possible values and costs are so high that we need to know which are achieving their objectives and which are not.

The Trapped Administrator and the Experimental Administrator

If evaluation studies are necessary for decision-making, but rarely done, what steps can we take to see that more are accomplished? Campbell described the problem of the *trapped administrator* who has so committed himself to the efficacy of a program that he can't afford careful evaluations. This generates opposition to experimental and quasi-experimental evaluations and a dependence on hand-picked testimonials or guesswork.

One of the problems is that too many social programs are launched with unjustifiable ballyhoo about their value. They are sold with a variety of propaganda techniques which are intended to generate good feelings about the program. Unfortunately, administrators come to believe their own propaganda—an error well known to successful propagandists but one to be carefully avoided. One example of this would be all the positive statements about the effectiveness of drug-education in schools, much of which is being seriously questioned now (e.g., Halleck, 1971).

We ought to stop launching so many social and community programs as if we knew all the answers about their effectiveness. We ought to launch social programs as pilot projects which are experimenting with a particular approach or set of approaches. Administrators should be retrained or hired as "experimental" administrators—by that, meaning people who *start a program based on the importance of the problem and not on assumed solutions*. Most social problems do require some sort of solution but *we can justify our efforts on the extent of the problem rather than certainty about what to do*. Our experimental administrators would then be committed to trial programs, searching for solutions in alternate programs, not propagandizing about unevaluated programs. Experimental administrators would not be so threatened by program analyses of the powerful sort. Within a complex organization, they should also be rewarded for their orientation by the allocation of resources. If experimental administrators were given larger budgets, staff, and resources than trapped administrators, we would begin to see a radical shift in orientation on the part of administrators. This would be a shift to the advantage of both taxpayers and administrators themselves.

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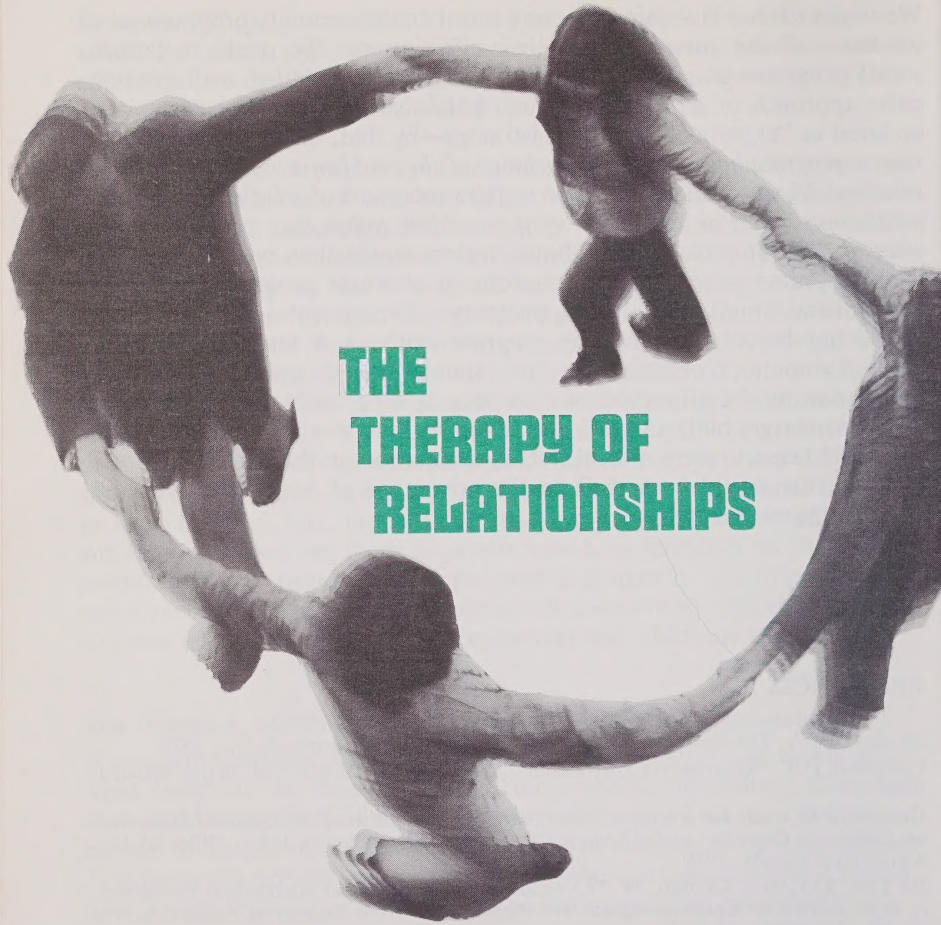

THE THERAPY OF RELATIONSHIPS

by Melville Gooderi

Dealing with the problem drinker as a monad, unrelated to his environment, will not define the communicational aspect of the problem.

The systems model, by focusing on the relationships between the nuclear-family members, explores the meaning of the drinking in the context of the problem drinker's real-life situation.

From infancy to adulthood, every problem drinker has been a member of a family or a family substitute. During this period, he experienced his most rapid developmental growth and was most sensitive to pressures from the environment. He was "programmed" by the interaction between himself and his environment. This programming is reflected in his repertoire of overall-behavior patterns.

The nuclear family, of which he is a member, consists of a group of individuals—or members—with relationships between them. This, then, is a *system* and thereby subject to certain basic laws of systems.

1. The system-as-a-whole is an entity and is greater than the sum of its parts.
2. Anything which affects the system-as-a-whole affects each individual unit within the system.
3. Any change in one unit affects all the other units individually and the system-as-a-whole.

In order for the "nuclear-family system" to develop an acceptable form of communication and social organization so that it can function to its optimum, limits must be imposed on the range of behavior exhibited by its members. In other words, individuality—or autonomy—must take second place to the welfare of the system-as-a-whole. Consequently, every

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system develops its own private ways of modifying the behavior of its members. This enables the system to exist in some form of dynamic equilibrium—or steady state—that is unique for each particular nuclear-family system. When any family member breaks the rules, the steady state is temporarily disrupted until the member either leaves the system or alters his or her behavior.

Because the individual members are themselves changing, family relationships and internal stresses also change. There is a continual on-going search for new and more functional levels of equilibrium to cope with the ever-pressuring environment. In terms of the system-as-a-whole, because equilibrium is the goal, the steady state becomes reinforcing to those behaviors that produce it. Over a period of time, every family develops certain enduring techniques for maintaining a steady state when confronted by stress—techniques that are characteristic for each individual family. These repetitive patterns of problem-solving are used regardless of the quality, quantity, or source of the stress.

In order to maintain a steady state a family may be maladaptive with respect to other systems, such as the immigrant family that maintains its original language and customs and thereby is at odds with its adopted culture. A family may also demand a degree of dysfunction on the part of one or more of its members in order to survive. For instance, if the wife is a better manager than her husband and takes over control of the money, she becomes "the boss." Now, while the husband is content to have his wife do the managing, he may not be content to have her be the boss. By assuming the role of "drinker," the husband legitimizes his inadequacy and his wife's dominance. At the same time, he obtains relief from any psychological pain that may be present. Conversely, in order to maintain her one-up position in the family, it is to the wife's advantage to reinforce her husband's drinking behavior. It is only when the situation gets out-of-hand that the wife will trot her husband in for "treatment." This request generally means "stop the damaging drinking, but don't change anything else in our relationship." This situation is a double-bind situation for the therapist which can be readily understood if one reviews the basic laws of systems.

Bearing in mind that the system-as-a-whole is an entity, that anything affecting it affects each member individually, and that any change in one unit affects each of the other units individually as well as the system-as-

a-whole, it becomes apparent that each individual's behavior is a function of the relationships that exist within the system. It follows, then, that behavior which in some way or other is defined as "sick" or pathological can no longer be seen as the sole responsibility of the person exhibiting such behavior.

Arieti (1969) has pointed out that because living systems are open systems the principle of equifinality applies, " . . . the open system may attain a time-independent state which is independent of initial conditions and determined only by the system parameters." While acknowledging the importance of initial conditions, particularly those of early childhood, he points out that "psychopathological structures are open systems" which are maintained by negative feedback loops of a psychological nature.

Wilkins (1962) and Halliday (1943) conceptualize illness as a reaction molded by positive and negative feedback. Conceptualizing in systems obliges us to examine the nature of the individual and the nature of the environment at a particular point in time. To restate this briefly, the sick or dysfunctional person is a manifestation of the system-as-a-whole to which he belongs.

The drinking response is a particular form of behavior. It includes thinking about drinking, acquiring the beverage, consuming it, experiencing the effects, recovering from the effects, and *simultaneously experiencing the reaction of the environment to various aspects of the drinking pattern.*

When the person's overall drinking pattern is examined in the context of the nuclear-family system, it immediately becomes apparent that there are a lot of "payoffs" for other members of the family. For instance, it is convenient to place responsibility for failure at school, for inadequate housekeeping, or for business incompetence on the drinking parent or spouse. Likewise to justify the non-medical use of drugs because the parent or parents use alcohol or tranquillizers. Considering the behavior of all family members, one realizes that a particular kind of drinking response, in a particular situation, and at a particular point in time is the only logical expectation.

The systems model forces review of existing methods of dealing with the problem drinker. Many alleged therapeutic procedures serve as negative

feedback—or reinforcing agents—to the end that the problem is aggravated rather than alleviated. Once a particular pattern of behavior comes into being, it might well tend to be self-perpetuating due to the influence of positive and negative feedback. How the pattern started is relatively unimportant. Instead of searching for the "Holy Grail" of "cause" long since buried in history, attention should be directed toward determining what is maintaining the on-going, dysfunctional behavior pattern or "What are the payoffs for the problem drinker, for the individual members of his family, and for the nuclear-family system-as-a-whole that maintains the pathological-drinking behavior on his part?" Let us be quite clear about one thing: nobody seeks help for a pathological-drinking situation unless the payoffs have become too expensive.

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"When the . . . drinking pattern is examined . . . it immediately becomes apparent that there are a lot of 'payoffs' for other members of the family."

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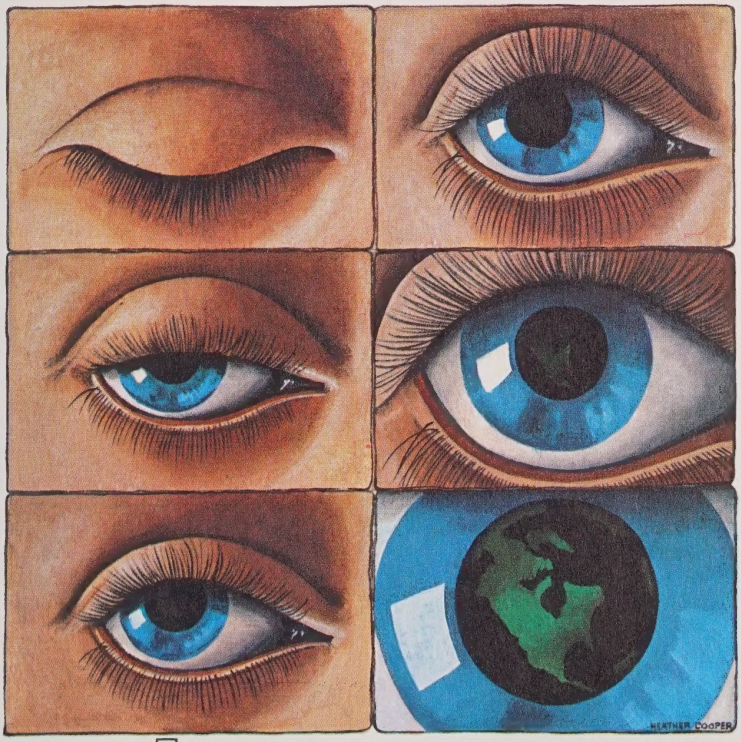

spring 1973

ADDICTION RESEARCH FOUNDATION OF ONTARIO

A frequently heard criticism of alcohol and drug education is duplication o service. Overlapping effort is not only wasteful but can be competitive to th point of destructiveness. The vested interests of some organizations and the relentless search for public and political support, often lead to action with limited (if not counterproductive) results. Co-operation and co-ordination i planning and implementation place heavy demands on the various levels o government and related agencies. Collaboration always runs the risk of becoming token involvement through meetings, consultations, and pious declarations of intent.

It is encouraging, therefore, to be able to report real movement from aspirations to action. Our colleagues in the Province of Quebec, Office de la Prévention de l'Alcoolisme et des Autres Toxicomanies (OPTAT), have joined this Foundation in a co-operative program to share experience, exchange publications, and plan new work together. An immediate result is that A.R.F. offices will distribute OPTAT's French-language materials to Francophones in Ontario. Similar arrangements will provide Anglophones in Quebec with the A.R.F.'s English-language materials. While consultation and discussions will continue as the program develops, the goal is results, not rhetoric.

But we have a long way to go. There are still some public and private agenci who insist on "doing their own thing;" producers of films and other educational aids pushing out-of-date and inadequate information in colorfu packages. Then there are the "carpetbaggers," educational entrepreneurs wh have exhausted their market in the United States and crossed the border, foisting often irrelevant and inaccurate information on Canadian schools ar institutions.

Initiative and independence need not be hampered by effective co-operatio The A.R.F. has an established reputation for sharing its knowledge and experience with others. We offer a standing invitation to other provinces, organizations, and all levels of government to avail themselves of this experience and reap the benefits of working together. *L.A.*

editorial

VOLUME 20 • NUMBER 1 • SPRING 1973

addictions

Addictions is published quarterly by the Addiction Research Foundation of Ontario, 33 Russell Street, Toronto M5S 2S1. The contents of each issue are selected on the basis of their potential interest to people engaged in research, treatment, or education in the field of alcoholism and drug dependence. *Articles published in* Addictions *reflect the views of their authors, not necessarily those of the editors or of the Addiction Research Foundation.*

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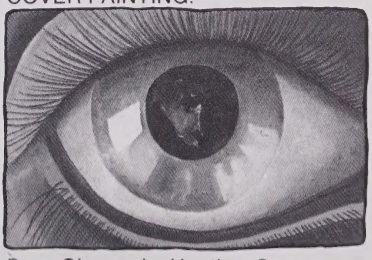
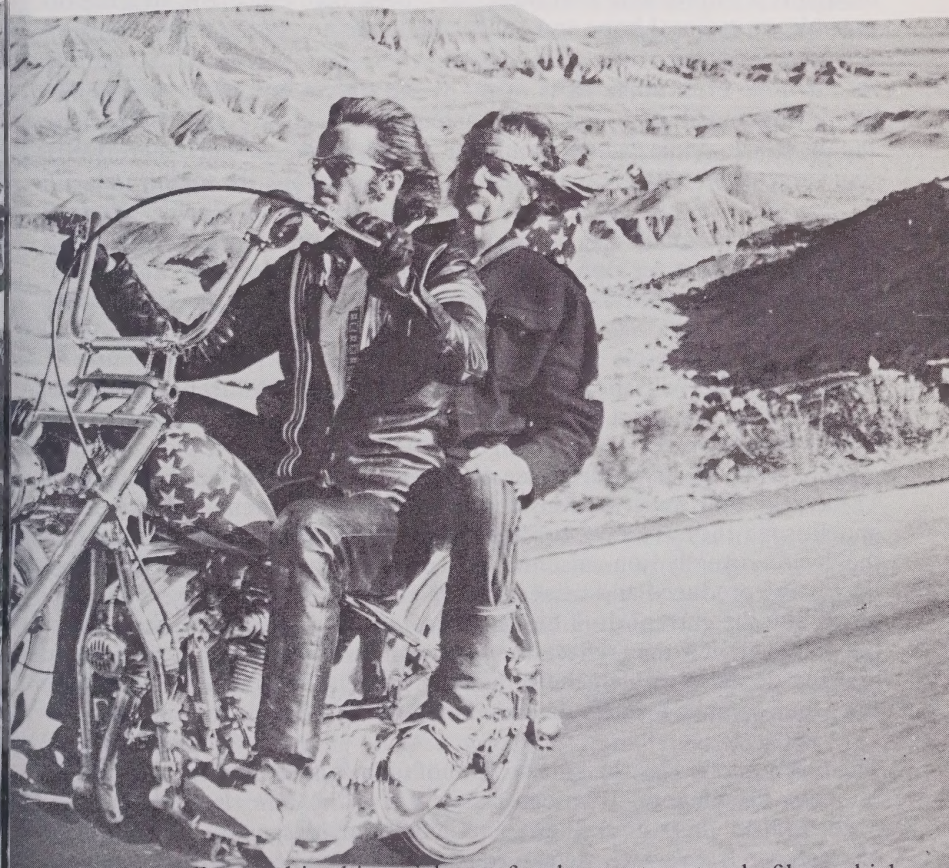


Drug Cinema by Heather Cooper.

BY S. TAQI

DRUG CINEMA



The films discussed in this article are for the most part only films which achieved international release and some degree of popular or critical recognition (the only "unknown" films I discuss are *Chappaqua* and *The*

Mr. Taqi is a young writer specializing in the field of drug abuse. He has written many magazine articles and collaborated with the United Nations Division of Narcotic Drugs.

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Connection, which I feel are important enough to deserve inclusion). The reasons for this selectivity are twofold: partly because of the questionable value of discussing films which never saw popular or critical daylight, and partly because of the difficulties and dangers involved in accurately documenting little known drug films of the past. It cannot be excluded that some notable drug films of yesteryear may for the time being be "submerged" in countries such as Sweden, Denmark, Italy and France, though it is improbable that there have been many of them. In spite of possible omissions, I hope and believe there are no glaring ones.

As for films from other parts of the world, there may have been some interesting contributions to the drug cinema from countries such as Mexico, Japan, Brazil, India, which would be worth noting, if only there were some means of accurately cataloguing and researching the topic.

The critical opinions expressed in this article are, unless otherwise stated, of course my own. An alphabetical listing of some 75 contemporary films with major or incidental drug themes can be found at the end of the article.

Anyone familiar with the contemporary American and European cinema has probably noticed a recent tendency toward what have come to be called "drug movies"—feature-length motion pictures whose plot and thematic content focus on drug use and abuse in modern Western society. These drug films must be considered a recent phenomenon: in America and Europe they are now coming out in clusters whereas 15 years ago they were virtually non-existent. What kind of films are these? Why are they being produced and what is their significance? This article attempts to explore the current drug film trend, to describe some important films, the points of view they reflect, the receptions given to them by audiences, and the degree to which the films may influence or reflect attitudes of the general public towards drug use.

The first modern film, the grandparent of today's drug movies, was probably Otto Preminger's American classic *The Man With the Golden Arm.* Made in 1955, this study of heroin addiction provides an invaluable frame of reference from which we can trace the development of the later drug films of the 1960's and 1970's...

If we glance at a list of the films of producer/director Preminger we grasp

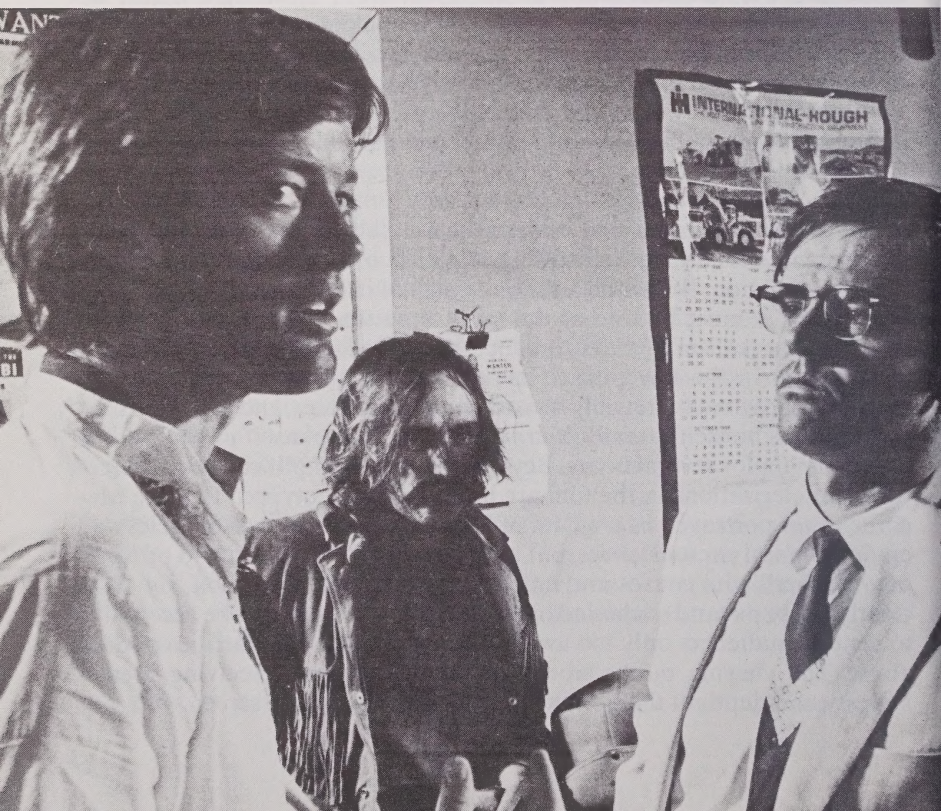
quickly that since the early 1950's he has usually preferred to make films of premeditated cultural and social significance: among his best-known works are *The Moon Is Blue, Saint Joan, Exodus, Advise and Consent, The Cardinal,* and *Anatomy of a Murder.* Thus being aware of Preminger's social and artistic convictions, we can assume that *The Man With the Golden Arm* was a *serious* 1955 statement on drug abuse and not simply a commercial enterprise exploiting the box-office appeal of drug traffic and addiction. And this is where the film's problem lies. Because despite its earnestness, *The Man With the Golden Arm* is a good example of the simplistic and outdated cinematic approach towards drug abuse which marked the films of the 1950's and early 1960's.

The story of *The Man With the Golden Arm* (based on Nelson Algren's novel of the same title) can be recapitulated as follows: a young musician from the Chicago slums has just been cured of heroin addiction; he returns home and tries unsuccessfully to stay away from the drug. Finally, innocently involved in a murder and knowing the police will give him little credence if they discover he is an addict, he decides to quit drugs abruptly before giving himself up for questioning. He does this in the film's famous 10 minute "withdrawal scene," and as the picture closes we are given the impression that the hero, Frankie Machine, has "kicked the habit" once and for all.

When *Golden Arm* was first released it was felt by many to be among the most intense and powerful films because of its "realistic" treatment of drug addiction. But while it retains much of its *emotional* impact when seen today, it must be said at the same time that what was considered heavyweight realism by 1955 audiences might today be considered paperweight pap. In the first place, Frankie Machine seems to get his habit back in record time—after only two or three heroin doses, and at the picture's end he cures himself literally overnight, by locking himself up and rolling about in pain for several hours. Beyond these oversimplifications of detail, the characterizations in the film are unhappily stereotyped: Frankie Machine is not portrayed as a victim of his own emotional inadequacies and environmental circumstances, but as the pawn of a depraved and prosperous "pusher" who coaxes and entices him back into addiction. By 1970, clearly, these pat and cliché-laden attitudes would no longer be acceptable to general audiences only too aware of the manifold complexities of drug abuse. The viewing public would be demanding and receiving greater honesty and depth in the presentation of drug use on the screen.

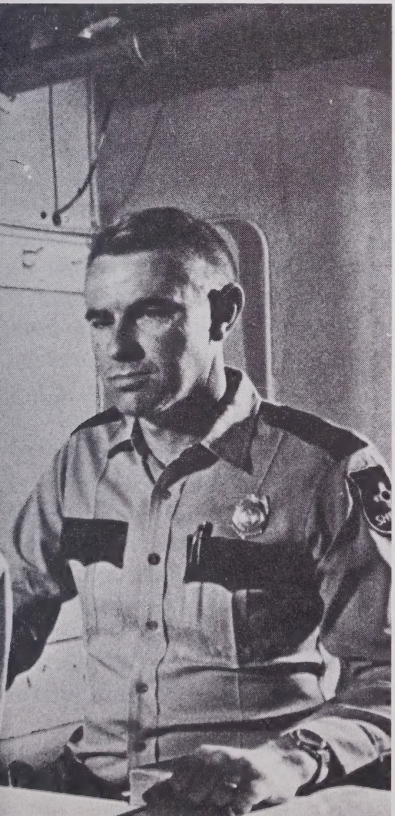
Drug Films of the Last 10 Years

Until about 1964 new drug films were as a rule not considered good box-office ventures—presumably because *The Man With the Golden Arm* was the "definitive" film on heroin addiction, and other types of drug abuse were not yet in the public eye. What few drug pictures there were (among them: *Hatful of Rain,* 1957, by Fred Zinnemann; *Monkey On My Back,* 1957, by André deToth; *Paris Blues,* 1961, by Martin Ritt) seemed to be reiterations of Preminger's over-simplified statements in *Golden Arm.* In 1965, however, a new trend was emerging: youth culture seemed to be slowly stressing the use of drugs like marihuana, hashish, and LSD—and by the late 1960's drug experimentation among young people from the middle classes increased. And because the film industry has always been nimble when it comes to exploiting crazes among the young—witness rock'n'roll films during the mid-1950's, twist dance films during the early 1960's, and surfing films during the mid-1960's—there was a swift increase



in the production of drug films. By the 1970's drug films appeared to have become altogether commonplace: while in all of the 1950's there were probably no more than half a dozen major drug films produced in the West (and most of these about heroin addiction), in the first two years of this decade over a score have been released—films dealing with all types of drugs: opiates, cannabis, hallucinogens, stimulants, etc. But before examining some of these modern films in detail, it may be useful to consider a few preliminary questions about them, and also to become acquainted with one or two background facts about the drug film phenomenon.

First of all, why do most drug films seem to be coming from the United States in particular, and to a lesser degree from Great Britain? The answers are threefold: to begin with, drug abuse among young people is a fashion which since the early 1960's has been primarily identified with the youth



Easy Rider, ©1969, Columbia Pictures.

of "hip" America and "mod" England—therefore many American and British film creators feel that drug use as a movie theme has a legitimate timeliness and a definite social relevance. Directors from countries such as Italy or France, however, may well feel that drug abuse is not familiar enough to a broad cross-section of their local public to warrant a filmed exploration of the problem.This idea is underscored by the fact that several non-English speaking directors who *have* made films touching on modern drug use—the Italian Michelangelo Antonioni, French directors André Cayatte and Barbet Schroeder, and Czech directors Milos Forman and Ivan Passer—have chosen to use English and American characters or settings for these films. A second reason why many drug pictures seem to be produced in the United States is that while in most other countries persons of *every age group* are counted among regular cinema-goers, in America this is definitely not the case: older and middle-aged Americans appear to prefer television and other activities and it has been estimated that 50% to 75% of all U.S. cinema admissions are chalked up by under 30-year-olds.Thus it is clear that in order to survive, American producers must serve up films with themes that youthful audiences are interested in and can identify with—i.e., drugs, social revolution, and of the generation-gap. Finally, the third reason for the greater number of English-speaking drug films is that while American and British film-makers have an almost entirely free hand in deciding what subjects to explore in their work, film producers in countries such as Italy, France, and Spain must take into account the problem of official government stances against films which might glorify drugs, glorify bloodshed, create dangerous political and social unrest, etc. Some producers attempt to solve this problem by initiating their projects outside of their own countries, thus technically making them "foreign" films and perhaps less vulnerable to home censorship. Barbet Schroeder did this with his film *More.*

Are Modern Drug Films Popular in General? Not significantly more or less than other types of movies, if we judge by box-office receipts. One drug movie *(Easy Rider)* has been a legendary financial success, several others have done very well *(Joe, More, Zabriskie Point, Taking Off),* and a large number of them—particularly independently produced and distributed films (those made without the backing of a major film company) have been box-office disappointments. Many drug pictures, however, seem to end up showing profits, if only because they are usually shot with unknown casts and below-average budgets—*Easy Rider,* for example, was made with a reputed $340,000 when by current American standards a

film costing five times as much is considered inexpensive.

As for particular points of view and treatments of subject matter, the only factor most drug films have in common is that their makers are comparatively young and inexperienced: while a 45-year-old director is today considered young, most drug films are made by men in their thirties and even twenties, and several of these films happen to be the director's debut picture. But apart from this age factor, there seems to be no single element common to all modern drug films—they range from comedies to melodramas, from semi-documentaries to fantasies—as an examination of a few of them reveals.

Cannabis in Films

Blow-up. Until the mid-1960's cannabis was rarely mentioned or seen in feature films—indeed it is difficult to think of a single major pre-1965 movie in which cannabis appeared. Of course, this is not too surprising when we remember that cannabis abuse was not a significant social problem in the West until the late 1960's.

The first major film to make a statement on cannabis use was probably *Blow-up* (1966) by the Italian director Michelangelo Antonioni. In *Blow-up* Antonioni studies how an indecisive but successful professional man involved in a murder deals with his conscience when all the people surrounding him are capricious and indifferent. This happy-go-lucky social circle is represented in the film by the fashion-conscious London pop crowd of 1966—a glittering cluster of young people who have achieved success in the fashion and arts world. The climax of *Blow-up* occurs when the hero, at his wit's end over what to do now that he has discovered a murder, rushes to a party to seek out his best friend for advice. At this particular party, however, everyone has been smoking cannabis: the hero's friend is intoxicated and unresponsive, and couldn't care less about the newly-found corpse. Angered and frustrated, the hero starts to leave but unexpectedly bumps into a dreamy-eyed girl friend: he reminds her that she was supposed to be in Paris for the week-end. She calmly replies, "I *am* in Paris."

Antonioni, now 60, seems to have been one of the first film-makers to point out that for the new generation, *inner* travel may well be more important than conventional travel, that self-awareness may be more important than social awareness. By the end of *Blow-up* the hero has

apparently accepted the indifference around him, and he makes a final decision to mind his own business and let the murder go unreported.

Easy Rider. While *Blow-up* was not a film overly occupied with drugs, Dennis Hopper's *Easy Rider* certainly was, and its enormous financial success (over $16,000,000 grossed in the U.S. alone)[1] encouraged a wave of other drug films—in fact, in terms of influence and impact *Easy Rider* could well be the most important drug picture ever made.

Released in 1969, Hopper's film is about two hippy-type men motorcycling around America without aiming for any goal except personal freedom. They not only *use* drugs but *sell* them as well: the movie opens with their delivering a cachet of cocaine to a wealthy "connection."

The two heroes, while not hippies by self-definition, seem to be infinitely closer to hippy society than to "straight" society: whenever they travel in Establishment channels they are insulted, bullied, and laughed at. Apart from dealing in cocaine (and sniffing it in their spare time) they use LSD and smoke plenty of marihuana. Marihuana, in fact, is the key to the film—it is "pot" which symbolizes the difference between their moral code and the Establishment code, and director Hopper, 35, goes to some pains to establish the idea that, to the heroes, marihuana smoking is not an evil act, but, in fact, the reverse. In one peaceful campfire scene the two drifters gently teach a friend (an alcoholic lawyer, their sole Establishment ally) the correct technique for marihuana smoking, continually imploring him to forget all the nonsense he has heard about the drug in the past.

But society-at-large still seems unable to accept these modern day pilgrims and by the end of the film they have been wantonly destroyed.

Easy Rider achieved considerable critical success both in America and Europe, and immediately after its release many other films with similar generation-gap themes began bubbling up. In the long run, however, the essentially contrived impact of *Easy Rider* could well wear off, just as much of *The Man With the Golden Arm* has. The film's true significance lies in its success: young 1969 audiences identified themselves with these

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1. To better comprehend this film's box-office achievement it is worthwhile to note that according to the American trade journal *Variety*, *Easy Rider* has outgrossed such spectacular successes as *Lawrence of Arabia* ($15,000,000) and *A Man For All Seasons* ($12,750,000).

drug-taking wayfarers to the extent that they made *Easy Rider*, perhaps the first serious pro-marihuana film, one of the greatest box-office successes of all time.

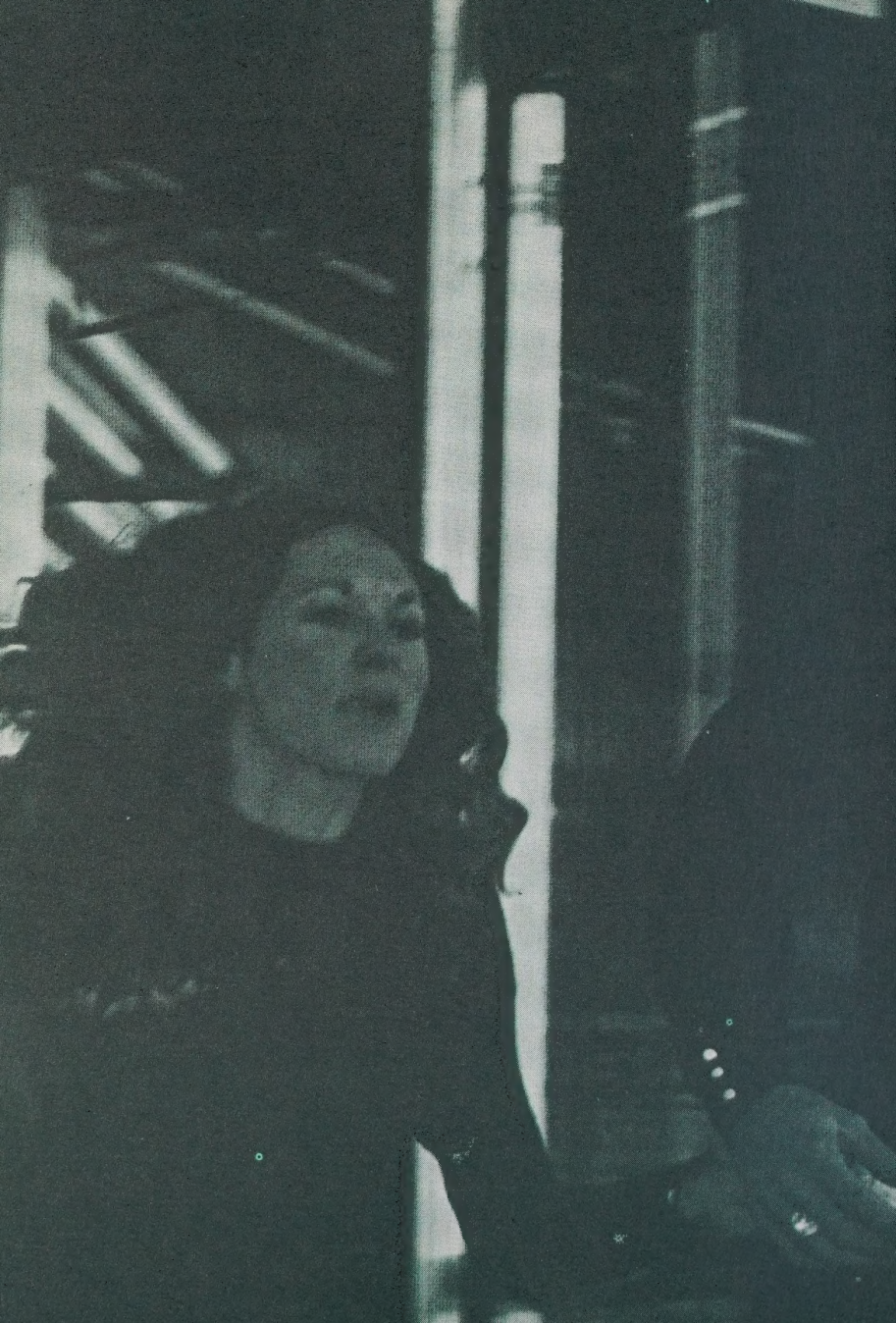
Cannabis in Other Films. Since *Easy Rider* there have been several other successful films using pot-smoking as a symbol of the conflict between the generations, and among the most important of these have been *Taking Off*, *Zabriskie Point*, and *Joe*.

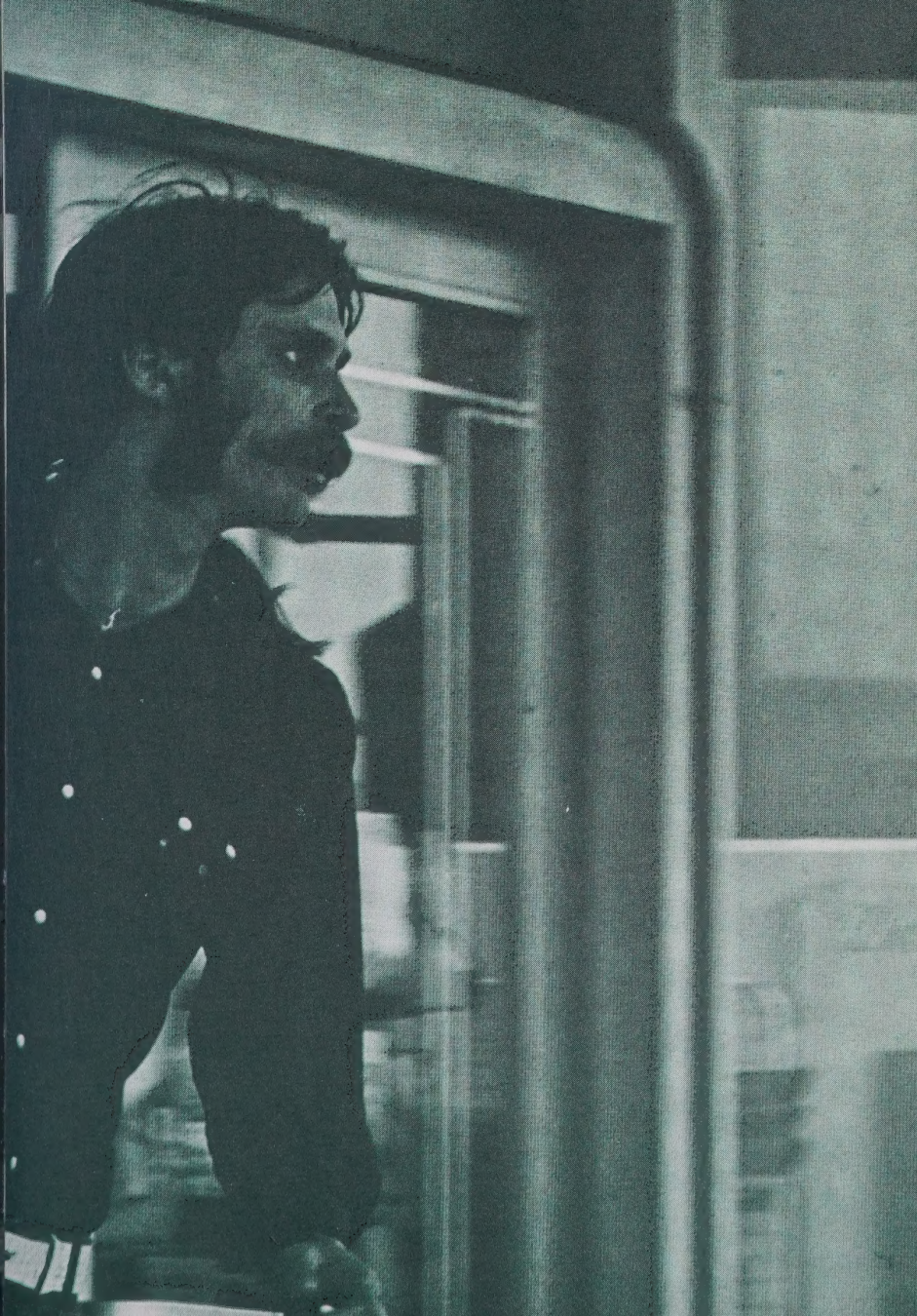
Taking Off (1971) is a generation-gap comedy by the highly praised Czech director Milos Forman and it is, in effect, a European's vision of modern American life. The picture's plot concerns the tribulations of a well-to-do American couple whose teen-age daughter shows signs of becoming a hippy. The parents are honestly confused about their child's changing values, her use of marihuana, and her strange assortment of friends, but they try to be open-minded to the extent of taking formal marihuana-smoking lessons (along with many other similarly perplexed couples) from a painstakingly sincere hippy teacher. Forman, however, in this pointed though perhaps simplistic commentary on America, seems to suggest that the only true difference between American youth and their elders is that the oldsters drink cocktails and sing along at the piano while the "revolutionary" young crowd smokes pot and strums guitars.

Joe (1971) is also a film about an American parent whose daughter has "dropped out," allied herself with the hippy movement, and begun using drugs. But though director John Avildsen infuses *Joe* with many moments of humor, it is essentially a tragic picture: the film breaks up U.S. society into two segments—the drug-taking easy-going young and the frustrated money-conscious proletariat. The conflict between these two factions is resolved only by the slaughter of a hippy commune by two infuriated members of Establishment society. One of the murdered hippies is the runaway girl, and her unknowing killer is her father.

In the film *Zabriskie Point* (1971), Michelangelo Antonioni's follow-up to *Blow-up*, the Italian director explores the "youth revolution" in modern America. Though this film was widely branded as Antonioni's poorest, it nevertheless represents a logical progression of the points of view he expressed in *Blow-up*. In that film he showed modern British adults acting indifferently to conventional society and using the cannabis drug for the purpose of inner travel; in *Zabriskie Point*, four years later, he describes how U.S. adolescents have now caught on to the drug—using it freely

Overleaf, *Dusty and Sweets McGee*, © 1971, Warner Bros., In





at almost any hour of the day or night. Pot-smoking seems to come full circle, in fact, when the teen-age hero of *Zabriskie Point* refuses a marihuana joint by saying, "No thanks—I'm on a reality trip." In Antonioni's eyes, being "stoned" has become the norm for much of American youth while being "straight" has become a deviation.

While many other recent films have given glimpses of the new generation's fondness for cannabis—among them *The Magic Garden of Stanley Sweetheart* (1971; Director: Leonard Horn), *I Love You Alice B. Toklas* (1968; Hy Averback), *Dealing* (1972; Paul Williams), *Three In the Attic* (1970; R. Wilson)—it is interesting to note the difficulty there is in finding cannabis films of a cautionary nature. While most heroin films seem to be, to some degree, warnings against addiction, cannabis films almost invariably show the drug in either a sympathetic or a noncommittal light—no doubt because they are usually made by young directors for young audiences, and any exaggerated anti-cannabis stands might seem hollow and didactic, and might be bad for the box-office as well.

LSD in Films

The Trip. LSD is often mentioned in drug films, and several of the films I have already discussed contain LSD sequences: the heroes of *Easy Rider* have a meaningful communal trip with two girls; one of the hippies in *Joe* peddles acid for a living; and in *More*, a French film on heroin addiction which I shall discuss later, the heroes use LSD in an attempt to discover their spiritual roots. The definitive LSD film, however, must certainly be American producer/director Roger Corman's color extravaganza *The Trip.*

Made in 1967 in California, just as LSD experimentation was apparently increasing among Western youth, *The Trip* was widely condemned as a cheap attempt to exploit the LSD phenomenon—partly because director Corman achieved his first success with low-budget science-fiction and horror films *(Attack of the Crab Monsters, X—The Man With the X-Ray Eyes*, etc.) and thus has been treated as a "non-serious" director by many American and British film critics; in several European countries, however, Corman is greatly respected and is something of a hero to many young film-makers.

The Trip is a serious film, and also an entertaining one...and it lives up to its promising title in that the final hour of the film is a study of a young man during his first LSD experience. Corman, now 45, has revealed

Taking Off ©1971 Universal Pi

in interviews that he himself took the drug under a doctor's supervision in order to prepare himself for the making of the film. He called his own LSD adventure "fantastic."

The hero of *The Trip* (played by Peter Fonda—who two years later would star in *Easy Rider)* is a young director of television advertisements who is worried about the shallowness of his life: he is merely a peg in the American commercial merry-go-round, his marriage has been a failure, and he has no idea of what his life means or implies. Consequently he feels compelled to take LSD in an effort to discover himself and his relationship to the universe. His "guide" for the trip is a medically knowledgeable young man who assures the hero that in the event of a bad experience an immediate injection of chlorpromazine will quickly sedate him. Thus put at ease, the hero swallows an LSD dose and the trip commences: Corman lets us observe the user's behavior, and at rapid intervals gives us "subjective" glimpses of what the hero is seeing, hearing, and feeling.

At first the trip is altogether smooth—Fonda is delighted as he scrutinizes an orange and seems to see the whole cosmos within it. Several minutes later, however, he has a vision of immediate death and is in near-panic until his guide soothingly talks him out of the crisis. After a couple of hours—still under the drug's effects and obviously in an uncommonly gentle mood—Fonda wanders off into night-time Los Angeles, but although his child-like wonder and friendliness frighten many passers-by, he himself sees nothing peculiar about walking into a strange house at 2 a.m., helping himself to a glass of milk, and then settling down in the living room to watch television.

Corman attempts to recreate LSD-type visions through the use of varied cinematic and soundtrack effects such as multi-colored lighting, super-magnified images, split-second images, amplified breathing and drum-beats, electronic music, and studio-created sound distortions.

Towards the end of his trip Fonda picks up a young woman in a dance club and spends the early morning making love to her in her bungalow near the ocean-side. He then falls into a long, restful sleep and wakes up the next day fully relaxed and refreshed. He walks into the sunshine and his companion asks him, "Was it worth it?" The hero hesitates and then says, "I suppose so," as the film ends.

This final bit of dialogue, this apparent "endorsement" of LSD experimen-

tation is what stung many critics when they wrote about *The Trip* in 1967: although it opens with a strong warning to the audience about the dangers of hallucinogenic drugs, the film goes on to show a man who uses LSD and far from suffering any ill-effects, seems actually to gain some insight from the experience. On close inspection, however, it becomes quite clear that *The Trip* is neither a pro-LSD picture nor an anti-LSD picture. It is simply Roger Corman telling the story of one man taking a single LSD trip. The main character is not an adolescent seeking thrills, but a troubled adult seeking help. Any statement on the "goodness" or "badness" of drugs is made by Corman in those scenes in which characters appear who are obviously on a steady diet of drugs: Corman makes it clear that *they* have not gained instant wisdom from them. Finally, the hero (as well as the audience) is far from convinced of the beneficial effects of the trip. He "supposes" that it was worthwhile as an experience, but he has no delusions about having become a changed man because of his solitary encounter with LSD.

LSD in Other Films. A few other recent movies (among them *The Chelsea Girls*, 1967, Andy Warhol; and *Performance*, 1970, Donald Camell and Nicholas Roeg) have tried to suggest how LSD experiences appear to the beholder, and a few futuristic films (*Wild in the Streets*, 1970, Barry Shear; *THX 1138*, 1972, George Lukas) have forwarded the idea that in decades to come LSD-type hallucinogens and other drugs may be used to keep the masses under psychological control, as in Aldous Huxley's novel *Brave New World.* Very few films aside from *The Trip*, however, have attempted to go deeply into the spiritual or quasi-spiritual implications of LSD use.

It is also worthwhile noting that the audio-visual "LSD effects" in films like *The Trip, Performance*, and *The Chelsea Girls* are not especially highly rated or appreciated by habitual LSD users and cannabis devotees: the all-time favorite "head picture" (film which "acidheads" and "potheads" enjoy viewing because it enhances the drug experience) is probably Stanley Kubrick's non-drug science-fiction epic, *2001: A Space Odyssey* (1968). This particular film contains many exquisite images of spaceships in the star-filled galaxy, and it ends with an extraordinary quarter-hour sequence of spectacularly vivid, exploding, abstract color images which many LSD-users have called the closest thing to an artificial LSD-experience currently available. Other movies popular with LSD and cannabis users are the

animated cartoon *Yellow Submarine* (1968), the rock music films *Monterrey Pop* (1968) and *Woodstock* (1970), and the science-fiction film *Fantastic Voyage* (1966).

Heroin Films

While narcotics addiction in the United States was rarely treated honestly in films until the late 1960's, two low-budget independent films by Shirley Clarke—*The Connection* (1961) and *The Cool World* (1963)—are worthy of a passing mention. These films, effectively probed the New York City ghetto world of addiction and squalor. *The Connection* (based on Jack Gelber's stage-play of the same title) was with its discomfiting realism a particular forerunner of the series of heroin pictures of the late 1960's and early 1970's: *Chappaqua, The Panic in Needle Park, Dusty and Sweets McGee, More, Believe in Me, Les Chemins de Katmandou, Born to Win, Trash,* and others. Before examining some of these films, however, it is important to point out that while Miss Clarke's two films dealt mainly with the American black as addict and outcast, most other heroin films

The Panic in Needle Park, ©1971, 20th Century-Fox Film Corporation.

have had whites as their main characters—perhaps because of the commercial importance of "audience-identification" with the players.

Chappaqua. Apart from *Synanon,* which was a semi-documentary film made in 1966, by Richard Quine about the well-known Synanon centre, an addict-rehabilitation organization in America, the only innovational heroin film of the late 1960's was *Chappaqua* (accent the first syllable), an independently-made movie by the American Conrad Rooks.

Filmed for the most part in France in 1966, the picture concerns an American alcoholic narcotics addict, Russel (played by Rooks), who decides to go to a Paris clinic for a cure. After arriving, however, Russel appears to escape from the clinic at intervals, and he receives many heavy dope doses from friends. He often suffers from dream-like narcotic hallucinations, continually returns to the clinic, and is finally—if temporarily—cured of his sickness.

Of all the addiction films, *Chappaqua* can easily be rated as the most

personal: director Rooks, now 37, has called it his autobiography—the son of a rich businessman in real life, he married unsuccessfully, drifted from job to job, and was finally given a three-year suspended sentence for narcotics possession. Eventually cured of drug dependence and psychologically rehabilitated at a Swiss sanatorium, he spent four-and-a-half years and $500,000 of an inheritance in making *Chappaqua.*

Chappaqua was one of the first films to eschew normal movie technique in order to get to the crux of the addict's problem of self-realization: the narration is often confused, color film is interspersed at appropriate moments to demonstrate the hero's mood and hallucinatory point of view, the actors' make-up and costuming change ridiculously within single scenes, and at times the film technicians are shown in order to underline the point that this is a *film* about a drug addict being made by an ex-drug addict. To add immediacy to *Chappaqua's* drugged atmosphere Rooks uses in his cast the famous ex-addict drug novelist William Burroughs, and also the drug-oriented poet Allen Ginsberg. The film's music track, which enhances the hallucinatory atmosphere, was composed and played by the Indian classical sitarist Ravi Shankar (who also appears in the film as a mystical "Sun God").

Because *Chappaqua* is an absurdly difficult film to follow, and because it has no "star" names to light up the marquee, it has never reached a large-scale audience—playing exclusively in art cinemas for just days at a time, and even then only in major cultural centres such as New York, Paris, and London. It is nevertheless a unique moment in the chronology of drug films in that it is an ex-addict's autobiography on film—produced, written, acted, and directed by the ex-addict himself. It is perhaps the addict's ultimate explanation of why he is what he is (Rooks hints that in his own case atrocious parental relationships were at the roots of his addiction), of the ecstasy and despair he feels when using drugs, and the psychological and physical pain he suffers when undergoing rehabilitation.

More. Photographed in France and the Balearic Islands and released in 1969, *More* was a very popular movie on heroin addiction made by the young French director Barbet Schroeder. Filmed without sound, the picture was post-dubbed and sub-titled into several languages and distributed successfully in many parts of Europe, and with lesser success in America (its relative box-office potency, however, inspired several American film firms to invest in their own heroin films).

On the whole, *More* was unsympathetically received by film critics because of its shallow characterizations, silly plot, poor acting, and appalling technical quality—what was often overlooked, however, was the film's one saving virtue: its successful depiction of an international sort of aimlessness among many young people in Europe, and the general wide-eyed fascination with drug use among them.

More is about a vacationing German student without any drug experience who falls in love with an American girl with a surfeit of drug experience. She teaches him how to use marihuana, trips with him on LSD, and eventually introduces him to heroin. He becomes addicted and eventually dies of an overdose while she obliviously moves on to another companion.

While strong in showing modern youth's desire to be in the "right" places at the right times (the characters drift out of the Parisian Latin Quarter and eventually turn up in fashionable Ibiza), and accurate in pointing out modern youth's eagerness to absorb knowledge of the mechanics of drug use, *More* was considered by many critics to be weak in offering insight into the psychologies of its rather unconvincing addicts. As a peek into the addict's mind, this film must almost certainly be counted as a disappointment.

Needle Park. The most publicized heroin film of recent years has probably been Jerry Schatzberg's 1971 movie about the New York City addict world, *The Panic in Needle Park*. Schatzberg, now in his thirties and formerly a fashion photographer (*Panic* was his second film), went to great pains to give an authentic and detailed picture of the city addict's world, and his efforts have given the film a much-applauded gritty, documentary quality.

"Needle Park" is the vernacular term for Sherman Square in Manhattan, a small congested area where city addicts gather for social and business purposes, and most of *Panic* was shot on-the-spot in and around this specific area.

The plot of the film is as follows: a Midwestern girl, Helen, who has just had an unhappy love affair and abortion, meets Bobby, a small-time drug dealer (and addict) who has lived in Needle Park all his life. The two fall in love and begin living together. Though Bobby professes to be able to control his use of heroin, it is obvious that he is emotionally

dependent on the drug, and in an effort to understand him Helen begins to mingle with addicts and to use heroin herself.

After a time she is also addicted and becomes a prostitute in order to support her habit. Finally, when confronted with the choice of either going to prison herself or informing on Bobby, she chooses the latter course and sends him to prison.

Needle Park is one of the few films to treat addiction not as a social problem but as a life-style: while most previous heroin films have treated the addict as a loner, *Needle Park* reveals him to be a member of a certain type of society—we see gossiping circles of close addict friends, hotel rooms full of jolly "junkies" shooting-up together, planning thefts together, eating hamburgers together. Beyond these unusual touches, the film is meticulously realistic in small details: the characters are multi-racial, both police and addicts use the same slang and vulgarisms, none of the actors have traditional "Hollywood" good-looks, the camera does not pull away when the addicts are about to pierce their skins with hypodermics but stays calmly in place to record the entire messy and sad spectacle.

Besides shedding light on the surface of New York's heroin subculture, *Needle Park* does a fair job in examining the why's of the main character's addiction: although Bobby is white, he appears to have much in common with the black ghetto addict—he comes from a lower class background, his elder brother is a professional thief, he subsists mainly on fried potatoes, and above all he has lived in *Needle Park* all his life. When Helen suggests that they leave and move into a "better" neighborhood, Bobby is mystified and a trifle hurt: to Helen, Needle Park is a freak show, to him it is home. Schatzberg makes it clear that to cure Bobby of his addiction would serve little purpose, as the chances are overwhelming that he would eventually wander back home to what he considers his normal life. To emphasize Bobby's normalcy Schatzberg shows that in many ways he is an average American—he wants to be *successful*—he dreams of being a big man in dope selling circles, of marrying Helen, and settling down with enough heroin to last a lifetime. On top of this, he is honestly mortified when his intended bride becomes a streetwalker and a heavy addict. If we subtract the heroin factor from Bobby's existence we perceive that he is otherwise a run-of-the-mill American boy.

Dusty and Sweets McGee. While *Needle Park* explored New York's heroin

"Zabriskie Point," ©1969, Metro-Goldwyn-Mayer I

subculture, Floyd Mutrux's *Dusty and Sweets McGee* examines the very different world of the West Coast American addict in semi-documentary style: the actors are authentic addicts and dealers, and while the film has a loose story to tell, it also contains direct camera interviews with users, much footage of heroin, needles and eyedroppers, and close-up views of different techniques of injecting the drug.

The plot of *Dusty and Sweets* concentrates simply on what happens among a group of young Los Angeles addicts during a single three-day weekend in 1970. What happens is this: the young title characters, very much in love, spend most of their time in a motel room talking about drugs and shooting them into their veins. They meet various addict friends, trade dope, and wander through the city looking for more, going through games of hide-and-seek with wary dealers who have concealed packets of heroin in empty telephone booths. By the end of the weekend one of the addicts has died of an overdose, a big-time dealer has been murdered, and *Dusty and Sweets* are arrested because one of their connections has informed on them.

While the New York City addicts of *Needle Park* were viewed as products of local environment, the West Coast addicts of *Dusty and Sweets* are shown to be startingly different: most of them appear to be young runaways from middle-class homes, and most of them also seem to be entirely self-centred seekers of self-destruction. While the New York addicts seem to feel that they are leading normal existences, the Los Angeles addicts seem to take a certain pride in their rootless, pointedly *abnormal* existence, repeatedly boasting to each other of their extraordinary drug exploits. But though *Dusty and Sweets* is a sharp, often discomfiting portrait of the teen-age runaway/drop-out as addict, it is nevertheless somewhat disappointing in that it seems to choose merely to display the intricacies of the addict's lifestyle without adequately exploring the reasons why.

Other Heroin Films. There have been several other recent international films probing the question of narcotics addiction—among them *Believe in Me, Les Chemins de Katmandou, The Way Out, Born To Win,* and *Narco*—but most of these have been poorly received and few achieved any popularity.

Believe In Me (1971; Stuart Hagmann) is another American heroin romance in which the lovers drag each other into the dregs of addiction. Although it is a sincere anti-hard drugs picture, most critics have agreed that the foolishness of its plot (the addict heroes are a brilliant New York intern and an intelligent, ravishing editress of children's literature) makes it impossible to sympathize with.

The French picture *Les Chemins de Katmandou* (1970), made by the prestigious director André Cayatte, also treats narcotics addiction in an unrealistic and romantic light, with the British heroine of the film eventually committing suicide.

The Way Out (1967; Irwin S. Yeaworth, Jr.) was about a group of addicts who found "the way out" of their addictions through praying to Jesus Christ, while *Born To Win* (1972; Ivan Passer) and *Narco* (1971; Claus Oersted) explored the worlds of New York City and Copenhagen drug addicts respectively.

There have also been many recent police adventure films which have had the heroin trade as the cornerstones of their plots: *La Horse, The French Connection, Kill, The Hired Killer, The Secret File of Sol Madrid,*

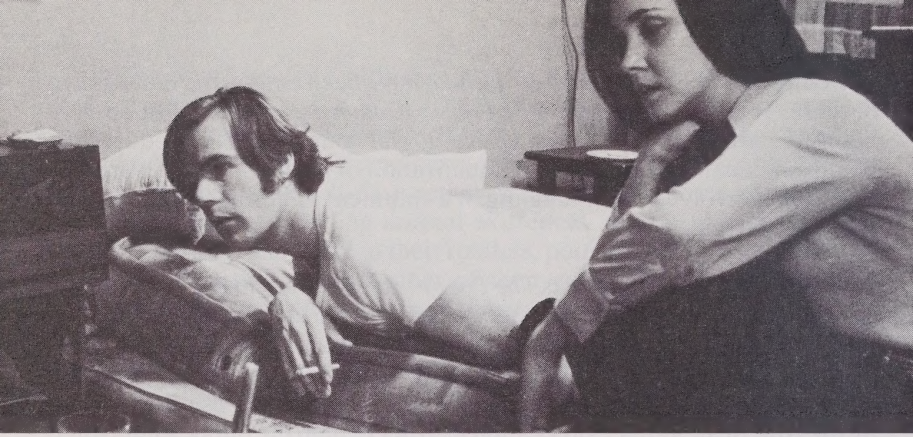
The Organization, and *Puppet on a Chain* have been among the best-known of these. The hugely popular *The French Connection* was in addition very highly regarded by many film critics; it was touted by the producers as being a meticulously accurate fictionalization of an actual 1960's narcotics case which involved the smuggling of a shipment of heroin into New York City *via* Marseilles.

Another interesting effort was *The Poppy is also a Flower* (1967) by Terence Young. This film, an adventure story which tried to underscore the international and human complexities of the heroin trade, was based on an original story by Ian Fleming, the British author of the famous James Bond spy novel series. It was made as part of a series of "all-star" films underwritten by the American Xerox Corporation in order to help the public understand the responsibilities of the United Nations and the scope of the UN system. The films were made for broadcasting on American television and for presentation in cinemas in other parts of the world.

Finally, no discussion of modern heroin films would be complete without a passing mention of the "underground" feature films currently being produced in America by film-maker Andy Warhol and his associate Paul Morrissey. These are humorous, often satirical, sex/drug films of the absurd in which the main characters are usually homosexuals, male prostitutes, and transvestites who are heavy and constant drug users. Among the better-known Warhol-Morrissey titles have been *Lonesome Cowboys* (1969), *Flesh* (1970), and *Trash* (1971). The films appear to be semi-improvised, and, according to the rumors which accompany them, the actors are very often authentically "stoned" on drugs during filming, and sometimes down actual drugs on screen. These pictures, made very cheaply (though their technical quality is rapidly improving), do quite respectably at the box-office in the larger American cities, but they cannot as of yet be considered to be in the mainstream of the film business. Ironically, however, the treatment of addiction and drug usage in the Warhol-Morrissey films often strikes viewers as more authentic than the treatment given the subject in more serious and expensive films: it seems quite clear that desire for realistic detail together with artistic honesty are the two most important factors in making a film about drugs successful both in critical and financial terms.

The Implications of the Drug Cinema

Drug films became commonplace in the late 1960's and early 1970's because



drug use among white middle-class young people in America and England became commonplace. Young people were *interested* in drugs, and older people had a seemingly unquenchable curiosity about the lives of younger people—so the Western film industry strove to satisfy both groups by providing films such as *Easy Rider, Joe,* and *More*—films showing the new generation "realistically," complete with drugs, sex, and revolution. The pictures varied greatly in quality—many were serious, even over serious, undertakings such as *Easy Rider, The Panic in Needle Park, Believe in Me,* and *The Trip.*

There was also an adult animated cartoon which had a variety of humanized animals smoking marihuana and hashish *(Fritz the Cat).* Though many of these films were unsuccessful, a few like *Easy Rider, More,* and *Joe* reached huge international audiences.

As of this date it seems that the Western film-going public has not yet reached the point where it has been satiated with drug films, but experience has shown that most film trends come to a peak after about three years of life, and then take two or three more years to burn themselves out. This is what happened with the screwball comedy craze of 1935-42 and more recently with the spy thriller film craze of 1962-68.

The Drug Film Controversy. There is, of course, a definite amount of dissent over the social value of today's drug films, and, predictably, one charge in particular is often levelled against the producers of drug-oriented pictures—namely the charge that they are glamorizing a social sickness, giving a distortedly romantic view of the drug-user's world, and may well be

ng: or the Berkeley-to-Boston Forty-Buck Lost-Bag Blues, ©1972, Warner Bros., Inc.

stimulating the young viewer's appetite for drug experimentation. Similar charges, however, are constantly hurled at almost all commercial film producers: makers of adventure films glorify killing and violence, makers of realistic romances glamorize promiscuity, makers of horror films promote perversion, etc.

In the end, the film-maker usually uses two arguments against these types of attacks: firstly, his freedom as an artist to create what he desires, and, secondly, the audience's freedom to see what it chooses. Most film producers argue that while society may have a right to prevent minors from seeing pictures which may be judged as unsuitable for them, no one has the right to keep an adult from seeing a film he is interested in. In America, consequently, most drug films are recommended by a film industry association to be shown only to "mature" audiences—which may mean 16-year-olds and above, 17-year-olds and above, or in some cases it may mean that minors are admitted if accompanied by a parent or adult guardian. England and most European nations have much stricter across-the-board age regulations, and many drug films are forbidden by law to be shown to under 18-year-olds. Though in 1967 *The Trip* was banned outright in several European countries, including England, and in 1969 *Easy Rider* encountered some initial European censorship problems, nowadays few major, serious drug films are even scissored in censor board cutting rooms, much less banned completely. European government film offices, however, as a rule frown on locally produced films which might tend to "glorify" drug use.

In fact, though, most drug films are not mere glorification ventures but serious projects undertaken by serious directors. Most of the directors of drug pictures seem to be in their thirties, while some of them are still in their twenties—and several of them have gone on the record about having personally experimented with drugs: Roger Corman has tried LSD; Dennis Hopper has said that real marihuana was used in the smoking scenes in *Easy Rider;* writer-actor-director Jack Nicholson has often stated that he has taken "all the drugs." Many film creators like Corman, Hopper, Nicholson, Peter Fonda, Paul Morrissey, Paul Williams, and Jeff Young have committed themselves on celluloid to more tolerant general attitudes towards drug use—particularly when it comes to the question of the so-called soft drug usage.

So thus taking into account the progressive attitudes of young film-makers like these towards the drug phenomenon we come to the inevitable question: are young people stirred to experimenting with cannabis, hallucino-

gens, pills, and other substances by these modern-day drug films?

In effect, the only realistic answer seems to be that young people follow the fashions of their times, and one of today's fashions seems to be drug-taking. Drug films—pro-drug films, anti-drug films, exploitation drug films—reflect that fashion and to some extent keep it alive and in the public eye. But at the same time, one can't help but think that in a left-handed way this may be a useful trend, because through over-publicizing the drug experience—dope episodes are currently so common that they appear gratuitously even in Wild West pictures *(Two Mules for Sister Sara, The Hunting Party)* the film medium itself may unwittingly lead to a subsiding of the seemingly universal drug fascination of the 1970's. And this, of course, is what many authorities would wish to happen in the first place.

A PARTIAL LISTING OF RECENT WESTERN FILMS WITH SOME THEMATIC TREATMENT OF DRUG USAGE

Films are listed alphabetically according to title, followed by date of release, director, and country of origin.

*Denotes film has major drug theme.

Alice's Restaurant, 1970, Arthur Penn, USA.
Been Down so Long it Looks Like Up to Me, 1971, Jeff Young, USA.
*Believe in Me, 1971, Stuart Hagmann, USA.
Blow-up, 1966, Michelangelo Antonioni, USA/Italy.
*Born to Win, 1972, Ivan Passer, USA.
*Cannabis, 1970, Pierre Koralnik, France.
*Chappaqua, 1972, Conrad Rooks, USA.
*The Chelsea Girls, 1967, Andy Warhol, USA.
*Les Chemins de Katmandou, 1970, André Cayatte, France.
*Cisco Pike, 1972, Bill Nortin, USA.
Confessions of an Opium Eater, 1962, H. Jackson, USA.
*The Connection, 1961, Shirley Clarke, USA.
*Dealing: Or the Berkeley-To-Boston Forty-Buck Lost-Bag Blues, 1972, Paul Williams, USA.
The Detective, 1968, Gordon Douglas, USA.
*Detective Belli, 1969, Romolo Guerrieri, Italy.
*Dusty and Sweets McGee, 1971, Floyd Mutrux, USA.
*Easy Rider, 1969, Dennis Hopper, USA.
Il était une fois un flic, 1972, Michel Soutter, France.
Flesh, 1970, Paul Morrissey and Andy Warhol, USA.
Fragment of Fear, 1970, Richard Sarafian, England.
*The French Connection, 1971, William Friedkin, USA.
Fritz the Cat, 1972, Ralph Bakshi, USA.
Happy Ending, 1970, Richard Brooks, USA.

Haschich, 1967, Michel Soutter, France.
*Hatful of Rain, 1958, Fred Zinnemann, USA.
*Hellcats, 1968, Robert F. Slatzer, USA.
High, 1967, Larry Kent, Canada.
*Hired Killer, 1966, Franco Prosperi (also known as Frank Shannon), Italy.
*The Hooked Generation, 1969, William Grefe, USA.
*La Horse, 1969, Roger Korber, France.
Hysteria, 1965, Jimmy Sangster, England.
*I Love You Alice B. Toklas, 1968, Hy Averback, USA.
*Joe, 1971, John Avildsen, USA.
*Kill, 1971, Romain Gary, France.
Legend of Lylah Clare, 1969, Robert Aldrich, USA.
Lions Love, 1970, Agnes Varda, France/USA.
*Lonesome Cowboys, 1969, Andy Warhol, USA.
*LSD, $5 Paradise, 1967, Giusseppe Scottese, Italy.
*The Magic Garden of Stanley Sweetheart, 1971, Leonard Horn, USA.
*The Man With the Golden Arm, 1955, Otto Preminger, USA.
Maryjane, 1968, M. Dexter, USA.
Me, Natalie, 1970, Fred Coe, USA.
*Mendiants et orgueilleux, 1972, Jacques Poitrenaud, France.
*Monkey On My Back, 1957, Andre de Toth, USA.
*More, 1969, Barbet Schroeder, France/Luxembourg.
Morire Gratis, 1968, Sandro Francine, Italy.
*Narco, 1971, Claus Oersted, Denmark.
*Obsessions, 1970, Pim de la Parra, Holland.
*The Organization, 1972, Don Medford, USA.
*The Panic In Needle Park, 1971, Jerry Schatzberg, USA.
*Paris Blues, 1961, Martin Ritt, USA.
*Performance, 1970, Nicholas Roeg/Donald Camell, England.
Pieces of Dreams, 1970, Daniel Haller, USA.
Play it again Sam, 1972, Woody Allen, USA.
*The Poppy is Also A Flower, 1967, Terence Young, USA.
The Private Life of Sherlock Holmes, 1970, Billy Wilder, USA.
*Puppet on a Chain, 1971, G. Reeve, England.
*The Secret File of Sol Madrid, 1967, Boris Sagal, USA.
The Strawberry Statement, 1970, Stuart Hagmann, USA.
*Synanon, 1966, Richard Quine, USA.
*Taking Off, 1971, Milos Forman, Czechoslovakia.
*Trash, 1971, Paul Morrissey, USA.
Three in the Attic, 1970, R. Wilson, USA.
*The Trip, 1967, Roger Corman, USA.
Two Hundred Motels, 1971, Frank Zappa/Tony Palmer, England.
Two Lane Blacktop, 1971, Monte Hellman, USA.
*THX 1138, 1972, George Lukas, USA.
*Valley of the Dolls, 1968, Mark Robson, USA.
Vivre à la folie, 1967, Jan Halldorf, Sweden.
*The Way Out, 1967, Irwin Yeaworth, Jr., USA.
*Wild in the Streets, 1970, Barry Shear, USA.
*Zabriskie Point, 1971, Michelangelo Antonioni, USA/Italy.

How Can Impaired Drivin

PHOTOGRAMS BY DONALD MU

ccidents Be Reduced?

by Sidney Katz

Today, and on every other day of this year, 14 Canadians will be killed

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and 500 injured in automobile accidents. The annual economic loss of these mishaps is estimated to be about two billion dollars.

It is only recently that we have begun to appreciate how fully alcohol, and drugs, contribute to this frightening epidemic of highway carnage.

A review of fatal accidents in three Canadian provinces, revealed that of 2,888 fatally injured drivers, 55% of those tested had been drinking; eight out of 10 had a blood alcohol concentration well above the legal limit of .08%. One study, by the Addiction Research Foundation, indicates that of the motorists convicted of impaired driving, almost 30% were chronic alcoholics. And, a recent enquiry into fatal snowmobile crashes which occurred during two winter seasons, showed that 50% of the vehicle operators had been impaired or drinking.

The same co-relation between drinking drivers and vehicular accidents has been noted in a 1972 U.S. report. In almost 50% of the 55,000 road deaths which occurred in one year, alcohol played some part. Furthermore, spot checks of cars on the road at night led to the disturbing finding that one in 25 automobiles was being driven by an impaired driver.

Despite the millions of dollars and man hours expended on "If you drink don't drive" campaigns; despite the introduction of deterrent legislation like the Breathalyzer test, license suspensions, jail sentences etc., the slaughter on our streets and highways, at the hands of impaired motorists, continues unabated. We have yet to discover the instruments which would reverse the climbing curve of fatalities.

Indeed, there's reason to believe that the drunk-driving picture may worsen in the future.

Each year in Ontario—and the same trend is apparent in other provinces—the proportion of adults in the general population who drink alcoholic beverages is increasing. So is the amount they consume. Inevitably, this will swell the ranks of the problem drinkers. At present, in Ontario, there are an estimated 130,000 alcoholics and a similar number who drink "hazardous amounts." Thus, in the future, there will be more than 260,000 individuals who will be a potential source of an inordinately large number of impaired driving mishaps.

Have any of the legislative or enforcement programs designed to curb impaired drivers shown promise of producing positive results?

At best, this question can only be partially answered. Scientifically controlled follow-up studies to measure the effectiveness of specific programs are rare. Again, it's difficult to accurately assess measures introduced in places outside of Ontario and Canada because the cultures may be extremely disparate. However, within these limitations, it's possible to comment on some of the programs aimed at the reduction of the number of intoxicated drivers on the highway.

The most significant recent event in this field in Canada was the introduction of the compulsory Breathalyzer test in December, 1969. According to an amendment to the Canadian Criminal Code, the driver suspected of having drunk a dangerous amount, was required to submit to a breath test. Impairment was legally defined as .08% blood alcohol content.

The first offense was punishable by a fine of $50 to $500 or a three-month jail sentence or both, and a three-month cancellation of the right to drive. Severer punishments were provided for subsequent offences. The driver who refused to take a breath test was assumed to be impaired and punished accordingly.

How effective has the legislation been in Ontario? Perhaps the most satisfactory answer that can be expected at this time was provided by Douglas M. Lucas, Director of the Ontario Centre of Forensic Sciences, who said: "I just don't know."

A study of all available Ontario traffic data justifies Mr. Lucas' ambivalence.

In the first year of the breath test there was an almost 60% jump in the number of arrests for impaired driving and, subsequently, an increased number of convictions. But the main thrust of the law—to keep bibulous motorists off the road—does not seem to have been realized. The occurrence of drunken driving and the number of accidents caused by impaired driving seems to have remained constant.

A more accurate indicator of the success or failure of the Breathalyzer law is the number of fatal accidents that occur in "prime drinking time,"

that is, between 10 p.m. and 4 a.m. The total number of mishaps in Canada in 1970 (when the law was in force) equals the number in 1969 (before the law was introduced), suggesting that the high hopes once held for the Breathalyzer legislation have not been realized.

The Breathalyzer law in the United Kingdom seems to have achieved greater success than ours. Since its introduction, the number of drivers fatally injured in car accidents having a blood alcohol concentration of more than .08%, has dropped by 40%. On the other hand, the proportion has remained unchanged in Canada.

Why the difference?

Some British observers attribute it to their legislation which permits a roadside screening test. The English policeman is empowered to require a motorist to submit to an on-the-spot screening test for several reasons, including his suspicion that the driver has been drinking, if the driver has been guilty of a moving traffic violation, or if he's been involved in an accident of any kind.

There is no provision for roadside screening in Canadian law. Therefore, the police officer must decide when he stops a motorist, whether or not he's impaired. If he thinks he is, he takes him to the nearest station for a breath test; if not, he lets him go on his way.

Trying to subjectively assess how much alcohol a person has consumed can be a chancy game. To be sure, motorists displaying gross symptoms of drunkenness are detained, but the system still allows some drivers who have been drinking heavily to slip through this kind of unscientific screening. Proof of this is that the blood alcohol concentration level of the average Canadian motorist convicted of impaired driving measured almost double the legally allowable limit of .08%. On the face of it, a strong case can be made to amend the Canadian law to permit roadside screening tests.

Can the impaired driver be punished out of existence?

Ontario law imposes fines, license suspension and, in some cases, a jail sentence on the convicted driver. It's doubtful if a $50 or $100 fine is an impressive deterrent, especially if the offender is affluent and earning, say, $15,000 or $20,000 a year.

In a modern society where driving a car is an absolute necessity for many people, one would imagine that the threat of having one's license suspended for several months would drastically reduce the occurrence of impaired driving. Obviously, from data gathered, this has not been the case in Ontario.

One contributing reason may be that a high proportion of "suspended" motorists flout the law and continue to drive. The risk of being caught is relatively low. In Ontario, there are almost 50,000 drivers whose licenses have been suspended. The majority of these drivers live in large urban centres where a systematic surveillance of their movements is impossible.

It's been suggested that instead of suspending the impaired driver's license, his car and/or the license plates should be impounded for a stated period. But would it be fair? Often, the convicted motorist does not drive his own car. Even if he does, other members of his family may require the vehicle for essential purposes. In such instances, the members of the offender's family are being unduly punished.

"Selective suspension" is a refined version of withdrawing the right to drive from a convicted impaired driver. Various studies, such as the one conducted in Ottawa, indicate that three out of four impaired drivers are arrested between the hours of 6 p.m. and 3 a.m., with the heaviest volume of arrests occurring on weekends.

Some observers propose that convicted drivers who earn their living by operating a motor vehicle and who are *not* chronic offenders, should be allowed to continue to use their vehicles except for the time noted above. "Such people, by selective licensing, can go on working and yet not be a public menace," says Dr. Ira Cisin, a George Washington University psychiatrist. In the absence of validating data, Dr. Cisin's statement remains a pious hope.

Nor is there any justification for believing that prison sentences will deter the drunken driver. The Netherlands has experimented with a get-tough policy. In a single year almost 50% of those found guilty of drunk driving were unconditionally given a jail sentence. Yet, despite this hard approach, the number of impaired driving convictions has continued to rise. And the same has been true in Sweden.

Perhaps the main reason why punitive measures have failed to appreciably reduce deaths and injuries due to drunken driving is that a significantly high proportion of road accidents are caused by a minority of motorists who have a drinking problem. They may be alcoholics or near alcoholics. "Punishing such people, makes as much sense, and is as effective, as punishing a person for developing cancer," observes P. J. Farmer, Executive Director of the Canada Safety Council.

Numerous enquiries attest to the fact that the problems of impaired driving and alcoholism are, to a large extent, synonymous. The people who are uncontrolled, compulsive drinkers, are the same people who cause alcohol-related vehicular accidents.

The Addiction Research Foundation compared the driving records of 98 patients being treated for alcoholism with those of average Ontario licensed motorists. The alcoholics had 2½ times as many accidents, nine times the number of convictions for impaired driving. One of the investigators, Dr. Wolfgang Schmidt, observed: "Alcoholism is largely responsible for drunken driving."

When Dr. M. L. Selzer of the University of Michigan, studied 67 men and women who had been arrested, one after another, for drunk driving in the vicinity of Ann Arbor, he concluded that "8 out of 10 of the arrested drivers had pathologically serious drinking problems." He described this aspect of the drunk-driving problem as "the unrecognized dilemma." Again, in Sweden, in one year, of 2,000 drivers convicted for driving while under the influence of liquor, almost half were categorized as "chronic alcohol abusers."

The alcoholic is a particular source of danger on the highway not only because he drinks a lot and frequently, but because of his personality characteristics and his behavior after drinking.

The myth that "the drinking driver who becomes involved in an accident is usually much the same as the rest of us in his drinking-driving habits, only unluckier" is refuted by Professor Joseph Little, a University of Florida law professor who has written extensively on legal aspects of alcohol and traffic safety.

To be sure, large numbers of social drinkers take to the highways after over-imbibing. But they don't do it with any great frequency, and, when they do, they usually drive only a short distance, maybe five or 10 miles to get home. Furthermore, if he hasn't consumed a massive quantity of alcohol, he drives with some caution, because, as Dr. Wolfgang Schmidt once explained, "He's aware that he's been drinking and he wants to keep out of trouble."

But the alcoholic is a different breed of driver after he's been drinking.

He's more likely to be a person possessed by strong feelings of self-destructiveness, hostility, and invulnerability—feelings he expresses in his drunken driving. Furthermore, a high proportion of alcoholics, it's been discovered, are more preoccupied with suicidal thoughts than non-alcoholics. This may account for the frequency with which they become involved in grisly, fatal smash-ups. As a matter of fact, the alcoholic is five times as likely to die in an accident of some kind, including traffic, as the average person.

The considerable overlapping of compulsive drinking and drunken driving has led many sophisticated observers, like Dr. M. L. Selzer, to conclude

that "only a program of compulsory treatment designed to rehabilitate the alcoholic will protect us from the impaired driver." This view is shared by the Executive Director of the Canada Safety Council, who writes: "Without a law requiring problem drinkers to undergo treatment, without trained social workers to work with courts to determine whether a driver has a drinking problem, and without proper clinics to carry out treatment, we are by and large, wasting our time....Compulsory treatment of problem drinkers and D. W. I. (driving while impaired) repeaters must be given high priority."

The San Diego, California, Municipal Court has been exploring the effectiveness of compulsory treatment for problem drinkers. Motorists who have been convicted more than once for drunken driving are fined $25 and given a 30-day jail sentence. However, the court agrees to suspend the prison term if the offender takes treatment at an alcoholism clinic, attends AA meetings, and undertakes not to drink for a year. Dr. Keith Ditman, a psychiatrist affiliated with the program, says: "Within three years after the initiation of our program, the number of impaired driving arrests has declined by 40%."

In Edmonton, Alberta, the courts are experimenting with compulsory education. In addition to being fined and having his license suspended, the judge imposes a probation order that compels the defendant to attend four lengthy educational sessions which graphically inform the "student" about the effects of alcohol on the body and senses; the horrors of traffic accidents; how to recognize and manage a drinking problem; etc. George Strachan, the course organizer, observes that in the first 14 months after the program was launched late in 1970, there were 1,000 "graduates." Only 10 of them were convicted again for impaired driving. "Without the program, about 250 of them would have been repeaters," says Strachan.

Drugs are another source of driver impairment which have not received sufficient attention, both those prescribed by physicians and those obtained illicitly. The breath test is of no value in detecting chemicals in the body; an analysis of the blood and/or urine are required.

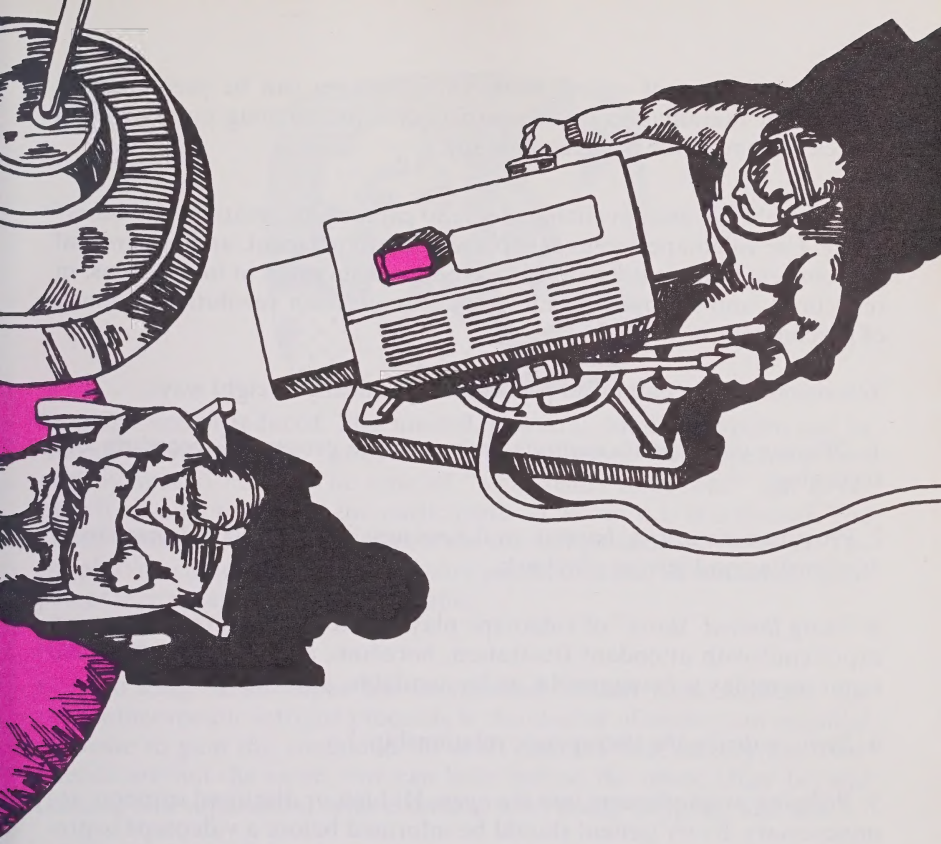
Precise, wide-scale information about the extent of drug-caused driver intoxication and measures designed to control it are meager. What limited studies that have been done suggest that impairment due to the combined consumption of both drugs and alcohol are not infrequent.

When 3,400 motorists arrested in Santa Clara County, California on drinking charges were given blood and urine tests, it was found that one in five had also taken drugs. An examination of 80 impaired drivers by the Ontario provincial Forensic Science Centre revealed that 72% had ingested chemicals. The most popular, in order, were barbiturates, tranquillizers, narcotics, and amphetamines.

In Clark County, Nevada, of 255 drivers arrested for drunkenness, it was discovered by blood test that 50 had done little or no drinking. But, further analysis revealed that 40 of these 50 had been taking appreciable amounts of sedative drugs. The same was true of some of the drivers who had consumed large amounts of alcohol. In a recent interview, the investigator, Dr.Thorne Butler, a pathologist at the Southern Nevada Memorial Hospital in Las Vegas, observed: "It's possible that substantial numbers of those stopped by police for erratic driving or moving violations but who don't have high blood alcohol levels, may have a sedative drug in their blood."

In view of the rapid increase in both the medical and non-medical use of drugs in our society, Canadian law should be amended to permit the use of blood and urine tests when the Breathalyzer tests are negative.

VIDEOTAPE AS A MEDIUM OF THERAPY



by Robert R. Rynearson and Harry A. Wilmer

Videotape becomes useful in psychotherapy when the therapists and patients are willing to learn. Such learning is a dramatic experience as the participants (patients and therapists) collaborate and study the instant replay. Training is possible at *all* levels, from the supervision of others

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to the supervision of self. Portions of videotapes can be preserved for subsequent examination by the participants, for teaching purposes, and for scientific research in psychotherapy.

Man has always used available media to capture his creativity for others to see. The videotape serves as a personal, interpersonal, and impersonal go-between. What is unconsciously creative is revealed in indirections, in reflections, and in shadows. Electronic circuitry can revolutionize much of psychotherapy.

Television may be employed psychotherapeutically in eight ways:

1. Offering participants *multiple options* in the process of recording and reviewing.

2. Providing *simplicity, honesty,* and openness in the practical mechanics of recording and instant playback.

3. Using *limited "doses"* of videotape playback to avoid an overwhelming experience with attendant frustration, boredom, and fatigue so that the input on replay is manageable, understandable, and engaging.

4. *Democratizing* the therapeutic relationship.

5. *Bringing psychotherapy into the open.* Hidden or disguised cameras are unnecessary. Every patient should be informed before a videotape is prepared. Invasion of the patient's privacy can be avoided only by truly informed consent. When tapes are not erased and are stored, a signed permit should be inserted.

6. *Maintaining a healthy skepticism, a questioning of videotape techniques.* Methods must be modified according to the "set and setting" so that televising does not become a dull, pedantic, or destructive operation.

7. *Never employing television to exploit, coerce, or intimidate.* The moment the videotape becomes a device of "one-upman-ship" by patient or therapists, it becomes an arm of individual or mutual neurosis.

8. *Using the picture on the monitor to eliminate the physical environment, producing a visual gestalt.* By using zoom lenses, the screen image can

be magnified or reduced. This limited, powerful, single viewpoint can be multiplied by multiple cameras with one or more videotape recorders and by special effects. The tone of "what really happened" can never be felt by anyone except the participants in whom it is reactivated. The effectiveness of television depends on the imagination of its users. The simplest machinery is best for ordinary psychiatric use; nevertheless, competent technicians should be available.

Rationale

For too long the therapist has immunized himself from scrutiny. The psychotherapeutic intrigue proceeds in the cloister of secrecy, an essential requisite to gain the confidence of most patients. But secrecy and confidence are not the same; one can hide behind the other. Once beyond training and supervision, who examines what really happens, and how?

Glover wrote in 1929, "...in many instances it is an open question whether some of the psychotherapist's sustained capacity for professional objectivity is not purchased at the ransom price of refractoriness to self-inspection; or, to put the matter another way, whether relative freedom from the irritation of self-questioning does not play a part in the psychotherapist's choice of a profession."

A primary object of psychotherapy is honesty. With proper cooperation of patient and therapist, most people report a wholehearted enthusiasm for the videotape experience.

We have used open, undisguised cameras in a variety of ways—sometimes with the patient alone in the room speaking in a monologue, or with the patient and doctor (with or without a cameraman) being videotaped in

an office. Paranoid patients participate and seem to profit from an open camera. When trained videotape technicans work as a part of a psychiatric team, the impact of their presence on the doctor-patient relationship seems to be determined more by the doctor's anxiety than by any other single factor. The use of television in psychotherapy without simultaneous or alternating views of the doctor is just another way of allowing the doctor to hide. Every therapist who has exposed himself to television at times has been shaken when he sees and hears himself in action.

Apparatus

Although improvement and miniaturization of videotape equipment is continuous, this should not deter anyone waiting to buy tomorrow's newest gadgets from buying equipment today. Unfortunately, videotapes of one brand are not compatible with machines of another brand. We understand that within a short time all Japanese equipment will be compatible. If so, American manufacturers will follow suit. One should try out several types before purchasing his television equipment. The one-half inch tape is much less expensive than the one-inch size, but the picture definition suffers.

Sophisticated special effects, split screen, superimposition, and other devices will be available with the advent of relatively inexpensive equipment. That television will be a standard tool in psychiatry within the decade is a reasonable hypothesis. Even today, an electric outlet is not needed for portable, battery-operated equipment.

Methodology

One of the most important roles of the therapist is to permit the patient to participate actively in the production of the videotape and in the evaluation of the replay. The replay reawakens the total experience and its feeling tone, and allows the participants a "second chance."

The longer the replay is delayed after the experience, the more its value diminishes. Before making tapes, the therapist must decide

1. How much time will be devoted to the videotape.
2. How much and what parts of the tape will be played back.
3. How much time will be spent on viewing and discussing the tape.
4. Whether or not the tape is erased or viewed subsequently.

Videotape provides an ideal tool for family therapy. Although the useful-

ness tends to diminish progressively according to the number of participants, it has an important potential for groups of all sizes. In groups of more than 30 persons, the use of two cameras is desirable. One tape recorder and two cameras can be switched to record desired action, or two recorders (with two simultaneous recordings) can play back side by side. This not only gives the viewer optional viewpoints, but makes the group less self-conscious than when only one camera is "pointing."

There are dangers. People have a propensity to become fascinated with gadgets. Any psychiatrist initiating television in his private office, clinic, or medical centre should begin with simple, inexpensive equipment. Every patient is not a candidate for videotape therapy, but probably only a few would not profit if it were used properly. Conversely, any psychiatrist whose rigid and compulsive nature forces him to treat patients in his own stereotyped way had best leave television alone. It follows from the preceding statements that the "set and setting" are more crucial than the machinery. The beliefs, attitudes, and personalities of the participants (coupled with the wider and the circumscribed environmental setting in which the recording is used) are key factors.

The psychiatrist may have a fixed camera with fixed focus, or he may have a skilled cameraman in or outside the room. If the cameraman is "on his own," the product will be as good as his perception, bias, or preoccupations. If there is a director, preferably a psychiatrist, the camera will reflect his point of view. In groups, we find that having the patients act as cameramen is valuable. A camera can either tyrannize or be the "open sesame" to new insights.

Psychotherapy tapes should not be preserved without the written consent of the patients—specifically spelling out the type of audience to which

they may be played. Even with this consent, the doctor is ethically and morally bound to avoid playing for certain audiences anything that might in any way hurt or jeopardize the patient. Closed-circuit televised psychotherapy must have the patient's truly informed consent.

When videotaping is going well (when the patient and doctor are adjusted to it), we have noted that the psychotherapy is seldom affected. Because of the camera, some content is withheld and some content is specifically revealed. For example, a patient in her initial videotape group (although she had been in therapy and in groups for months) revealed for the first time that she had an illegitimate child. On the other hand, another patient would not criticize a ward physician until the camera was turned off.

Using the television as an adjunct to psychotherapy offers a great challenge in identifying and understanding metaphors—a fertile power possessed by man. In our postliterate society (for which most of us are poorly trained because we have been taught to read and think in terms of linear progression), there is no escaping the electronically activated metaphors of a whole new world of sight and sound reawakening within us, affecting us and our therapies. While most of us are busy reading line after line, page after page, following our deductive reasoning, the extraordinary complexity of the "all at onceness" of the television experience—a new type of involvement—is a most hopeful transition into a new world of reality. Television provides an opportunity for highly disciplined examination and refinement of psychotherapy as an art as well as a discipline.

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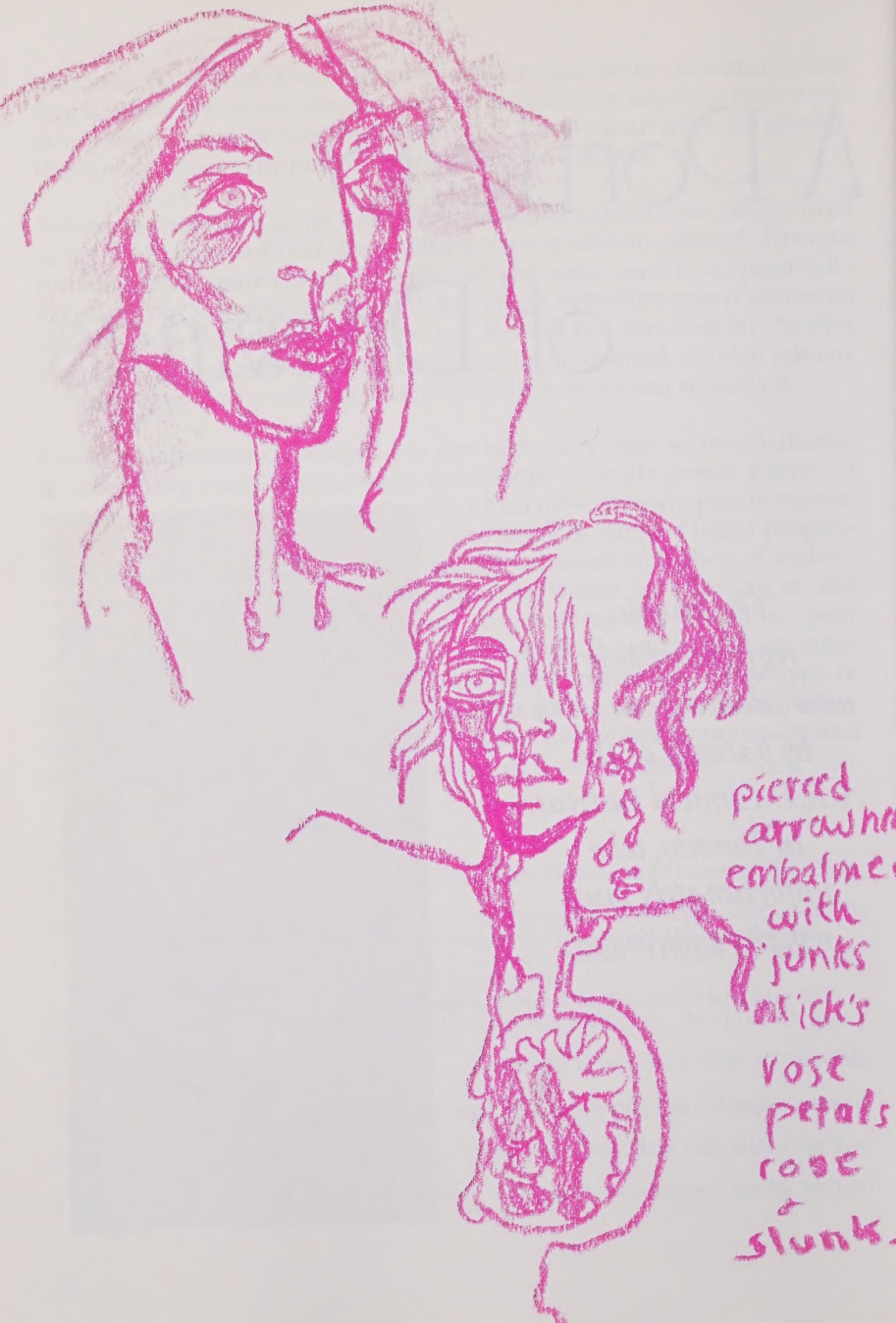
A Portfolio of Drawings

The samples reproduced here were selected from work by patients of the A.R.F. Clinical Institute in Toronto, who unfortunately must remain anonymous.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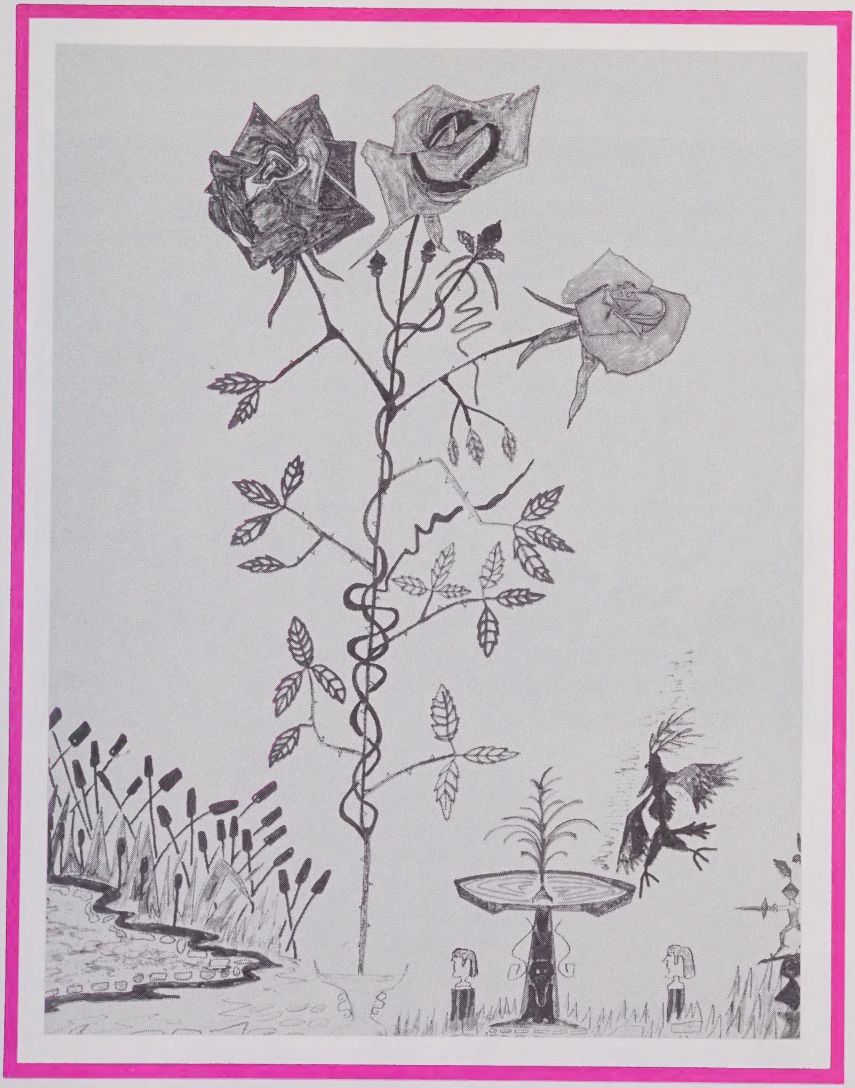
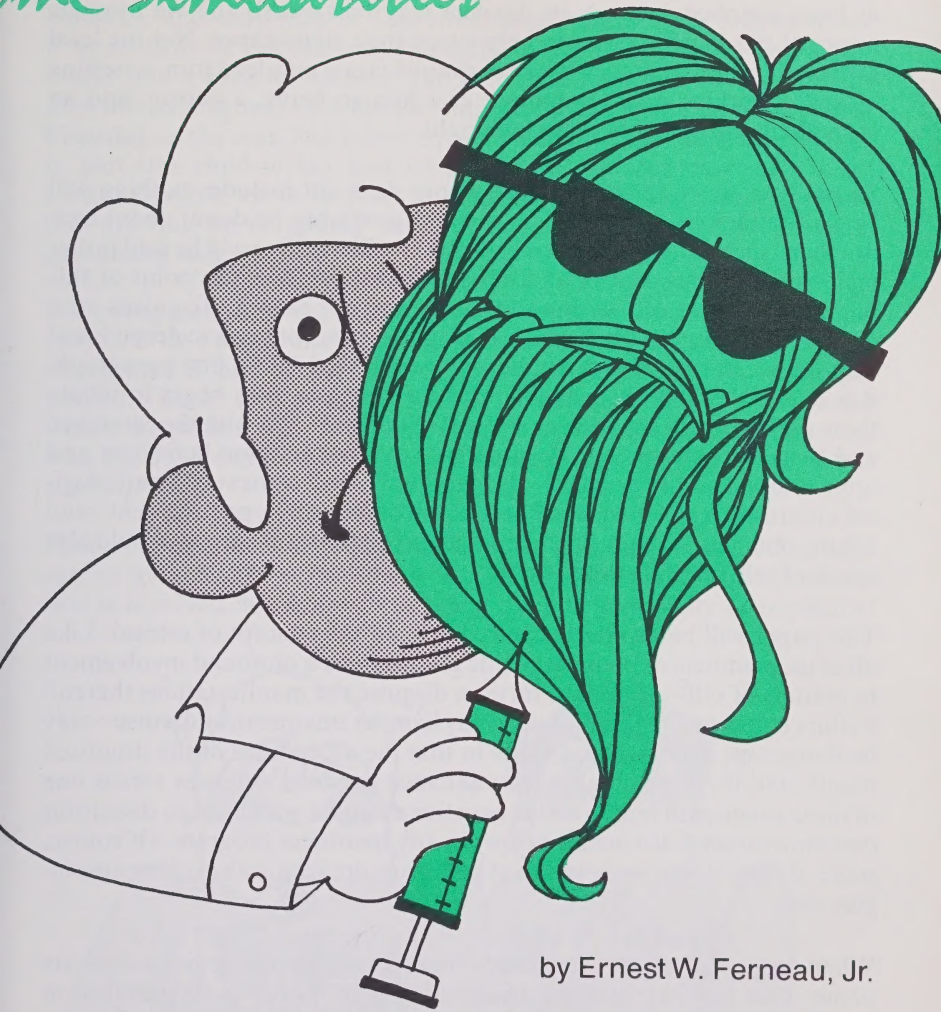


THE DRUG ABUSER AND THE ALCOHOL

ILLUSTRATIONS BY WALTER STEFOFF

ome Similarities



by Ernest W. Ferneau, Jr.

There must be, at very first, a word about the usage in the title. Clearly, there are alcoholics and there are alcoholics—just as there are drug abusers and there are drug abusers. There is no *the* alcoholic, nor *the* drug abuser. If such usage is employed in, for example, an article title (probably for,

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Dr. Ferneau is Clinical Psychologist at Lahey Clinic Foundation in Boston, Mass. This article appeared in *The British Journal of Addiction*, Vol. 66, No. 1 (pp. 71-75), June, 1971. Reprinted by permission of the author and publisher (E & S Livingstone Medical Journals).

as here, simplicity's sake), its dangers may be several, and we must be aware of this issue in order to help lessen their significance. Not the least of these dangers is that such usage or simplification may lead from a viewing of and a working with the patient as a human being, a person, and an individual—with dignity in his own right.

Secondly, a word about what this paper does not include—nothing will be said (although, it is believed, it could profitably be done) about ego-functions such as integration and perception. Something will be said rather incidentally about control and defense. What really is the point of this paper is to focus on the manifest, surface-appearing, disguises—the obvious—but disguises nevertheless, disguises that continue to deceive and trap us. So, in line with the philosophy expressed in the first paragraph, it is believed that to help highlight these disguises is to begin to vitiate them and their efficacy as a general sort of defense—first with the caretaker, and then with the patient. As a defense, of course, these behaviors and appearances can be reviewed—also profitably—in a context of a pathological mourning reaction to loss. The loss, of course, can be past, present—and future, potential, expected, anticipated, predicted (and here, we could also speak of self-fulfilling prophecies).

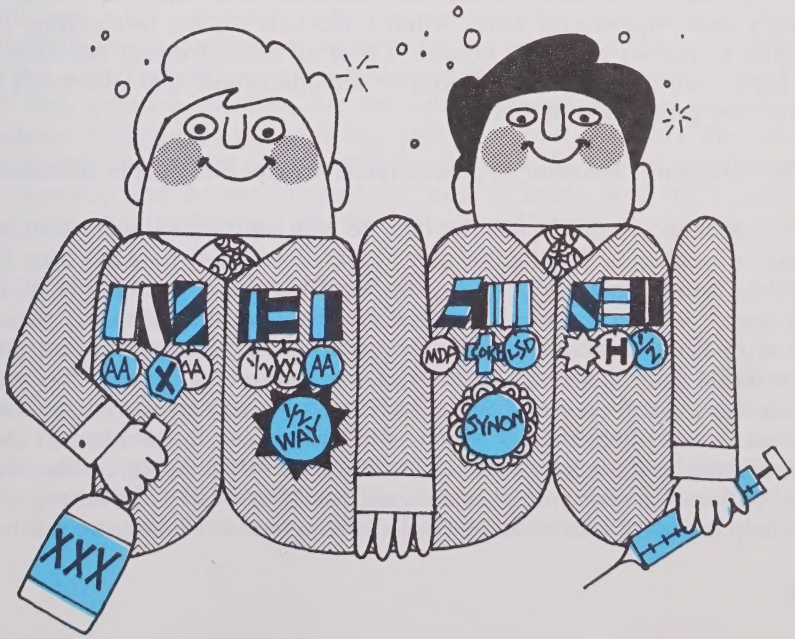
This paper will be primarily centred around the concept of esteem. Like all of us, members of both of the title groups have a profound involvement in matters of self-esteem and further, disguise the manifestations thereof. Failure to recognize such disguises may hamper treatment, and worse—may be dangerous and antitherapeutic in that the acceptance of the disguised manifestations at face value may enhance our own defenses versus one of these clients and reinforce our negative attitudes which are so disastrous (see motivational discussion below) in any treatment program. Of course, some of these disguises or indicant behaviors are seen within other nosologies also.

When disguises fool, we sometimes begin to give each disguise a separate name—thus (e.g.) sanctioning the dealing with it only in its manifest or superficial aspects—treating it lightly, as a game people are playing. Steiner[1] is the latest to follow this path. He has specified alcoholic games, and we wonder if it is worth it—especially when we consider all the time and energy involved in both the original paper and the comments it has evolved so far—"Drunk and Proud of it" (D and P) is one of the games "identified" in his paper—with the reasonable and logical conclusion: deal with this

behavior, and only with it. Therefore, there ceases to be a need to see it as an issue of esteem (motivational), to put this game as well as the others into a broader context, and then deal with that—by asking why does this patient have such low esteem, and then dealing with those causes. Focusing on the manifest, however, has a seductive appeal; we are always, in part (the child in us), looking for magic, the easy answer. It is not always possible for us to keep in mind that "easy come, easy go," and that growing up or getting better is not a simple, easy, or non time-consuming task.

Following such paths also leads us to the diagnostic dilemma most recently criticized by Frank,[2] and seems to deny the continuity of development, which then is part of the failure to promote an integration within the patient. This in turn serves in part to increase the feeling of confusion within the patient. This "confusion" also may take on various faces—e.g., who am I? (However *this* may be expressed, or wherever!—e.g., in the streets.)

However—back to the thrust. One disguise encountered in both groups can be termed the "best-of-the-worst" approach. It is this manifestation that is involved in the apparent bragging (either explicity or implicitly)



of the drug abuser when he states that he was on 15 (count'em, folks!!) "bags" of "H" a day, and not a mere three or four. Drug abusers also "brag" about "busts" and police involvement (number and kind, quantity and quality), and receiving them, as well as treatment personnel. The alcoholic also brags—perhaps vis-à-vis police, but probably more often with regard to his wife and his employer.

The "brag" may also be of another type: I've got two (again: count'em folks! two!) therapists. The child in the patient adopts the simplistic view that sheer numbers represents excellence. The "brag" is of course primarily another way to bolster esteem and/or prevent its further loss.

To further gain reassurance and prevent loss of esteem, each subculture has its own lingo (as well as to a great extent, in the area of drug abuse—clothes and appearance) as do latency clubs: the message being a denial —we have something you don't have. It is essentially the same behavior we sometimes see in membership in fraternities and fraternal organizations. It is "whistling-in-the-dark" behavior; with the reassurance that they are "hip" and others are square, they protect (e.g.) against dissonance. A bravado is also sanctioned by the "in" or "hip" group.

A resident of Marathon House[3] comments on this behavior: "Man, we don't want 'war stories' here...When a kid tells stories, he's saying, I'm better or badder than you because I shot all these drugs at one time or I broke into so many drug stores, or something like that. We won't let anybody get away with that."

The "bragging" behavior, of course, tends to drive away the professionals.

The alcoholic similarly tells us that he was intoxicated every day, not just on weekends. The heroin user "looks down" on the LSD user. The whisky users ("nothing but 'top drawer'") speak disparagingly of the drinkers of beer, and neither would associate with a "wino." A variant of this is found within the alcoholic element of the Skid Road subculture—the bottle gang member has no use for a "rub-a-dub" (a user of a non-beverage alcohol, such as sterno).[4] Another variant occurs when the patient refers to institutions such as "drying-out" farms (and the number of) used, on the one hand, or time spent at Lexington or Forth Worth, on the other, as "badness" status symbols or as "goodness" symbols ("The times I tried to help myself!!"). Involvement with other agencies such as the self-help

groups (AA or Synanon, e.g.) may be utilized as evidence of how high one stands now in the fight to get well. (The use of a pecking order or social scale as an esteem booster also is found among another deviant group—that of sex offenders, where rapists have no use for child molesters, and neither can abide he who was convicted of incest.)[5] Of course, we cannot say that esteem is the only motivator in any of these behaviors, but it does seem to be a significant reason, and quite probably, the primary one—at least, at this level of specificity.

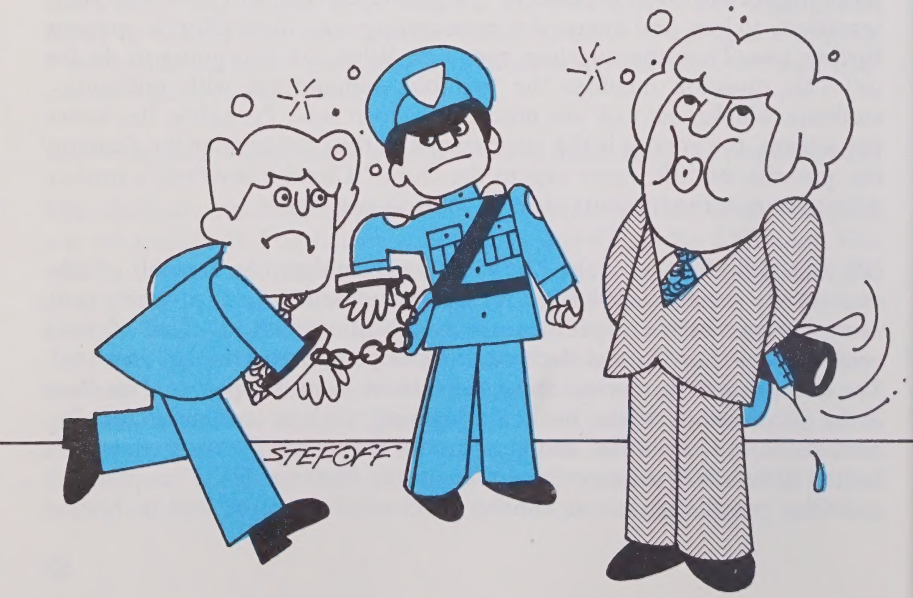
As the alcoholic and the drug abuser share the best-of-the-worst phenomenon, so too they also share the type of initial reaction in group psychotherapy. The reaction is, of course, shared with all others who enter therapy —group or otherwise, and indeed, who enter into any human relationship—but particularly, a helping one (and more particularly, a helping one in the psychological sphere). They approach a therapist: Who are you? What are you going to do to us? What are your qualifications, your credentials? All of this seems to be a defense against further loss—especially of esteem—and hopefully in service of increasing esteem, by being able to "brag" that "we have a top-notch therapist" (as well also, e.g., to identify with his power). One source of credentials and power can be, of course, the sanction and backing of the institution involved. Further, there continues to be a testing-out of responses to the questions; the greater the pathology or the lower the esteem, the greater the loss, and the consequent sensitivity to loss, and hence, the more testing-out—in an effort to prevent further loss. Then the question becomes: What are you going to do for us? This question includes the two fold demand (as with militants—students, blacks, etc.) of: do much, and do it *now*. Probably, the lower the esteem, the greater is the insecurity, and thus the greater the demand for quantity, and the more urgent the "now." Clearly, however, a further determinant is the (urgent) plea for controls and limits.

Obviously, both groups also "con" and manipulate. As a result of low esteem, the patient tells of and to himself: "I can't do it properly (i.e., using my own assets, capacities, and capabilities) with *my* (lack of, lost) competence—thus, I must deceive or force people into doing it for me." The deception is primarily: make them *think* I am competent. This then is the relationship of the behavior (coming, e.g.) to its first underlying motivation. We can utilize another term for the reason for the individual's feeling of relative incompetence. We can say he is (or feels) "castrated," and thus put the reason at another level of abstraction, and in body—

image/concept/perception terms. However, it is symbolic, and the usage may do both us and the patient more harm than good—by alienating other caretakers.

The conning and manipulative behavior, of course, is not limited to alcoholics or drug abusers—or indeed, to those others diagnosed as suffering from a psychiatric illness. It is seen to a great extent in the rest of our society today, in this "age of character disorders"—when the "big sin," the unforgivable error (see below), is to get caught. It's OK to do anything (or *not* to do something, such as "get involved"); it's the age of "situational ethics," of expediency and exploitation; it's especially now that the end(s) justifies the means—just don't get caught, or have it backlash, and so on. Be a smooth, efficient, capable, competent "wheeler and dealer." (It is as though the basic dishonesty is encompassed in the contradiction-in-terms.) In "normals," the con is more integrated into the total behavior and personality; it's utilized to a lesser degree; there is less total reliance on it; and the utilization is shrewder (i.e., less immediately [e.g.] self-defeating).

Again, there is no doubt that we all con and manipulate—and to the extent that we are ill, or the child in us is dominant, and we have a particular predisposition to con and so forth, we do more of it. But the occurrence



of this in patients emphasizes the need, and is one reason, for staff teamwork and well worked-out administrative procedures (collaboratively achieved) to leave as little leeway as possible for conning, or the playing off of one staff member against another. External controls must be utilized (but appropriately) when internal controls are lacking, and while internal controls are being fostered. Consistency must be presented to the patient by the staff as to the child by the parent (e.g.) as an example, to militate against the chaotic mask, and thus to help the patient to build it into himself. So too, leadership must be participative, and goals, superordinate. Janowitz's,[6] words have meaning in this context also: "...the goal of social control in a political democracy is to enhance the personal competence and personal control of the individual." On the ward, and in the clinic, this is psychological democracy. On an individual basis, growth of personal competence and personal control—freedom from the past—is the psychoanalytic rationale. Thus, helplessness and hopelessness are vitiated by growing competence (and, in turn, esteem), bringing greater freedom—and greater responsibility.

And as these groups brag and con, they further destroy themselves—by, as noted above, driving away helping personnel. Thus, these groups also share another unfortunate characteristic. The patient's self-destructive behavior, e.g., may lead professionals to be extremely prone to say, in a moralistic and punitive way, the members of either of the patient groups lack motivation. To tell (one way or another) the patient then to become motivated is as surely a rejection for him as it is for the adolescent.[7]

This phenomenon seems especially pronounced in the low-status problem areas (although I do not remember seeing it spoken of very vehemently in reference to the aged). An editorial note in a recent journal[8] cites a suggestion by Dorcas D. Bowles, a social work supervisor: "before they call disadvantaged families 'unmotivated' and therefore 'untreatable,' social workers should 'take a hard look' to see whether their traditional casework techniques are not too rigid." Apparently, at least in some areas, the more "sophisticated" term, "unmotivated," has replaced "lazy." A patient undoubtedly carries an added burden for each low-power subgroup with which he is affiliated (e.g., a black drug abuser).

However, this reaction does seem to be decreasing somewhat in alcoholism.[9,10] We are becoming more and more aware that to use the motivational construct in this way is to *not* use it in the service of a therapeutic approach

but rather in a destructive way. For example, this usage "...serves as a convenient rationale for the unwillingness to review and modify current policies and practices so as to encourage the alcoholic to seek treatment and stay with it."[10] Others have used the apparent block of dependency profitably in treatment; other ways to overcome or utilize apparent blocks arising from a so-called lack of motivation in alcoholism have been discussed.[11] Its underpinnings—moralistic and punitive attitudes—are apparently lessening in the area of narcotic addiction also[12]—at least in the public sphere (and thus it seems reasonable to believe, in the professional arena also).

For us to view motivation in all-or-none or global terms is to be as child-like as our patients. Moreover, patients always come to treatment with motivation—some of it "good" or adult or therapeutic; some of it "bad" or childish or conning. We see the wish for a magical cure, present to some degree in all patients, as childish. An example of "conning" motivation is seen in the addict who comes to treatment in order to "get down" to a point where three "bags" will make a good "high" of the day—at less cost. Whatever motivation is possessed by the patient on arrival it is in part a symptom, and therefore part of the presenting problem. The first barrier has been overcome—for whatever reason—and he is in treatment. But,

the same is true in any phase of treatment: e.g., our first job is to get the patient to come to group therapy (for if he isn't there, what can group do for him?); our second set of goals is to keep him coming, and to get him talking; and then to talk about profitable issues, the nitty-gritty.

Next, we must keep him in treatment. We must therefore immediately act to help the patient to strengthen the therapeutic or realistic aspects of his motivational complex, and to reduce or vitiate those negative or antitherapeutic aspects. Every success, no matter how minute, he experiences in each of these areas also boosts his esteem, and can be then used, for example, by the therapist to aid the patient in weathering future storms.

Also, both groups bolster esteem in other ways, for example, by a façade of controlling the situation. This is done, e.g., by coming late to sessions. (Yet, of course, all behavior is multidetermined, and other determinants of this "coming late" behavior may also include, e.g., hostility.)

Both groups also share other similarities of course.The drug abuser gets a "body-high," as the alcoholic experiences the decreased physiological tension with the alcohol depressant. Both areas involve self-help groups that no doubt have their positive aspects, but are disadvantageous in that they don't appeal to a great many of the sufferers, utilize untrained personnel, and further so act as a temporary measure and alleviate society's guilt that coping measures remain temporary, minor, and relatively ineffective.

But the theme or thread of esteem points primarily to the consistency, continuity, and coherency of human behavior—in *us,* patient and staff.

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HOTOGRAPHS BY DONALD MURRAY

Trends in Drug Use among Metropolitan Toronto High School Students: 1968-1972

by Reginald G. Smart, Dianne Fejer, and W. James White

In January, 1968 we began a survey of drug use among Metropolitan Toronto students. Its purpose was to determine: (1) the extent to which various drugs were used by students in Grades 7, 9, 11, and 13; (2) the

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students' attitudes toward these various drugs; and (3) the differences in use and attitudes among various age and social groups.

Two years later (1970), we resurveyed the same or similar school classes in order to see whether drug use in general had increased and whether particular drugs were being used more or less frequently. It was clear that heavy use of illicit drugs increased over the period studied. It was also clear that if the rate of increase continued, it would take only four years until marihuana was used by more students than was alcohol at the time of the 1970 survey. This suggested that in less than six years (at the 1968-70 rate of increase) everyone would have tried marihuana.

In order to determine whether this rapid increase continued, we again surveyed the same or similar classes in 1972. There was in the 1972 study, as in the 1968 and 1970 studies, an attempt to discover the factors associated with drug use by relating drug use among students to personal, parental, and social factors of many kinds. Finally, we included a lie scale in order to determine the validity of student responses.

Method

All data in the 1972 study were obtained from a questionnaire completed by students in their schools. In each school in which Grade 7, 9, 11, and 13 classes had been surveyed in 1968 and 1970, the same number of classes was resurveyed. An attempt was made to return to the same class, but this was not always possible because the class numbering system had been modified and/or the classes were no longer intact. In about 20% of the schools, new classes within each grade were randomly chosen.

In selecting the schools in 1968, classes were randomly selected at each grade level until at least 120 students in each grade in each school district had been chosen. For purposes of this study, a high school district was taken to be a *high school attendance area* and to include the high school itself plus the various pre-secondary (e.g., junior high) schools that fed into it. In general, school districts were randomly selected within each borough.

Letters explaining the general purpose of the study and requesting permission for students to participate were sent to all parents. Where parents did not speak English, translations were provided. Students 18-years-of-age and older were allowed to sign for themselves.

A total of 6,641 students completed the questionnaire in 1972. This compares to 8,865 in 1970 (when Grade 6 students were included) and 6,447 in 1968. The overall completion rate was 69% in 1972, 72% in 1970, and 66% in 1968.

The questionnaire was administered to 342 classes in 66 schools by 25 interviewers. In all cases, the students marked their answers on an optical scanning sheet—a form, separate from the questionnaire, which was later read by a machine called the optical scanner. They were instructed not to sign their names or put any identification on the questionnaire or the sheet. The questionnaire asked for information on:

1. Demographic or social characteristics of the students;
2. Prevalence and frequency of the use of 13 drugs; and
3. The nine-item lie scale adapted from the Eysenck Personality Inventory.

The questions regarding demographic characteristics and drug use were identical to those previously used in the 1968 and 1970 surveys, except that the number of examples for one drug and the number of response categories for all drugs were increased.

Results

The pattern of drug use[1] by students in 1972 changed only slightly from

1. By *drug use* we mean use of a drug on *one or more occasions* during the six-month period preceding the answering of the questionnaire. It is important to note that "use" in some cases indicates use on only one or two occasions and also that some use of drugs under doctors' orders is probably included.

RATE OF DRUG USE BY TORONTO STUDENTS IN 1968, 1970, AND 1972

Percentage Using at Least Once in Last Six Months—Grades 7-13

	1968	1970	1972
Alcohol	46.3	60.2	70.6
Tobacco	37.6	35.5	38.3
Marihuana	6.7	18.3	20.9
Glue	5.7	3.8	2.9
Other solvents	*	6.3	6.5
Barbiturates	3.3	4.3	18.2
Opiates	1.9	4.0	4.0
Heroin	*	*	1.9
Speed	*	4.5	3.3
Stimulants	7.3	6.7	6.4
Tranquillizers	9.5	8.8	10.2
LSD	2.6	8.5	6.4
Other hallucinogens	2.0	6.7	7.2
Total students	6,447	6,890	6,641

*Data not collected in these years.

TABLE ONE

that found in 1970. Higher percentages of students reported using barbiturates, tranquillizers, alcohol, tobacco, and marihuana. The percentage reporting use of glue, speed, and LSD was lower, however, while those using opiates, stimulants, other solvents, and other hallucinogens remained unchanged. The percentage of students using each drug in 1968, 1970, and 1972 is shown in Table 1.

The highest rate of apparent increase was for barbiturates (from 4.3% to 18.2%). Much of this can be accounted for by the change in wording of the barbiturate question (i.e., "painkiller" was added as an example in 1972). Results from this question should be treated with caution until further data are available. Tranquillizer use also increased between 1970 (8.8%) and 1972 (10.2%), although it had decreased between 1968 and 1970. Although the proportion of students using stimulants had decreased slightly between 1968 and 1970, it did not change between 1970 and 1972.

Use of alcohol—by far the most widely used drug—was reported by 70.6% of students in 1972, as compared with 60.2% in 1970 and 46.3% in 1968. Some of this last increase may possibly be accounted for by a reduction in the legal drinking age (from 21 to 18) in 1971. The proportion of students drinking is now so high that a reduction in *rate of increase* can be expected. However, the trend toward a higher prevalence of drinking may continue.

Rate of tobacco smoking increased slightly. The percentage of students using tobacco was 37.6% in 1968, 35.5% in 1970, and 38.3% in 1972. Although overall changes were relatively small, the previous trend toward a decrease in smoking appears to have been reversed.

Marihuana[2] was the only illicit drug which showed a significant increase in use. The percentage of students using marihuana was 6.7% in 1968, 18.3% in 1970, and 20.9% in 1972. Although the use of opiates and other hallucinogens increased substantially between 1968 and 1970, neither changed between 1970 and 1972. In 1972, a question on heroin use was included for the first time; 1.9% of students reported using it.

The proportion of speed users decreased from 4.5% in 1970 to 3.3% in 1972. Data on speed use were not collected in 1968. Use of LSD also

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2. In all surveys, hashish and marihuana were grouped together under the name *marihuana*.

DRUG USE BY GRADE IN 1968, 1970, AND 1972—Percentage Using at Least Once in Last Six Months

	GRADE 7			GRADE 9			GRADE 11			GRADE 13		
	1968	1970	1972	1968	1970	1972	1968	1970	1972	1968	1970	1972
Alcohol	22.9	39.5	45.0	41.6	53.9	60.3	59.7	71.5	84.9	70.9	82.3	91.8
Tobacco	24.6	26.0	24.2	44.3	35.1	45.1	46.6	44.0	46.5	39.7	38.0	38.7
Marihuana	2.6	5.6	4.7	10.8	15.9	21.1	8.9	28.1	31.6	7.5	26.2	31.3
Glue	7.2	6.8	6.1	9.4	4.9	3.3	2.6	1.7	0.7	0.7	0.8	0.7
Solvents	–	10.0	12.0	–	8.7	7.3	–	3.5	2.8	–	1.5	1.7
Barbiturates	1.3	2.3	12.3	3.9	5.1	21.4	4.4	7.0	21.6	3.8	2.7	18.0
Opiates	1.1	2.5	1.9	3.0	4.7	5.6	1.8	5.8	5.0	1.0	2.8	3.6
Heroin	–	–	1.7	–	–	3.1	–	–	1.2	–	–	1.2
Speed	–	2.5	1.8	–	5.2	4.3	–	6.7	3.8	–	3.7	3.6
Stimulants	4.3	4.6	3.0	9.4	9.3	9.5	7.8	7.9	7.5	5.6	4.6	5.3
Tranquillizers	4.8	5.4	5.9	11.4	9.0	12.6	11.6	10.8	11.7	14.6	10.4	10.9
LSD	1.1	3.4	2.0	3.9	9.5	9.2	2.1	13.4	8.8	3.8	7.6	5.7
Other hallucinogens	1.0	5.1	2.2	3.1	7.5	9.8	1.9	8.7	9.8	0.9	5.5	7.5
Number of students	1,816	1,868	1,890	1,752	1,875	1,875	1,733	1,725	1,661	1,146	1,422	1,198

TABLE TWO

declined during this period. This was the reverse of the pattern between 1968 and 1970, when LSD use increased from 2.6% to 8.5%. Prevalence of glue use has steadily declined since 1968. Solvent sniffing, on the other hand, did not change between 1970 and 1972 (not included in the 1968 survey).

Frequency of Drug Use. The frequency with which students were using alcohol substantially increased between 1968 and 1972. In 1968, only 7.5% drank four or more times per month. This almost doubled in 1970 (12.7%) and doubled again in 1972 (23.3%). Therefore, total *consumption* increased substantially. Frequency of marihuana use increased from 1970 to 1972 among those who smoked it seven or more times during the preceding six months (from 7.3% to 9.2% respectively). There was almost five times the proportion of students using marihuana seven or more times in 1972 as there was in 1968. While frequency of smoking increased slightly for all categories of tobacco users, there was little change in the proportion of light and heavy users of opiates, LSD, other hallucinogens, glue, other solvents, tranquillizers, and stimulants.

Categories for frequency of use were expanded in the 1972 study to describe use of most drugs up to more than 50 times, use of alcohol up to almost everyday, and use of tobacco up to more than 25 cigarettes per day. Few students drank as regularly as two to five times a week and only 2% drank almost everyday.

Similarly, only 7% smoked from 10-25 cigarettes per day and even fewer (1%) smoked more than a large pack a day. About 3% of students reported using marihuana more than 50 times in the six-month period. However, few students had taken other drugs more than one or two times and less than 1% had used them more than 50 times.

Drug Use by Sex. A trend toward similar rates of drug use by male and female students was found in 1972. Generally, for those drugs in which rate of use increased (such as alcohol and tobacco), the increase among females was slightly larger than among males. Where use decreased (e.g., glue, LSD), the males were leading the females.

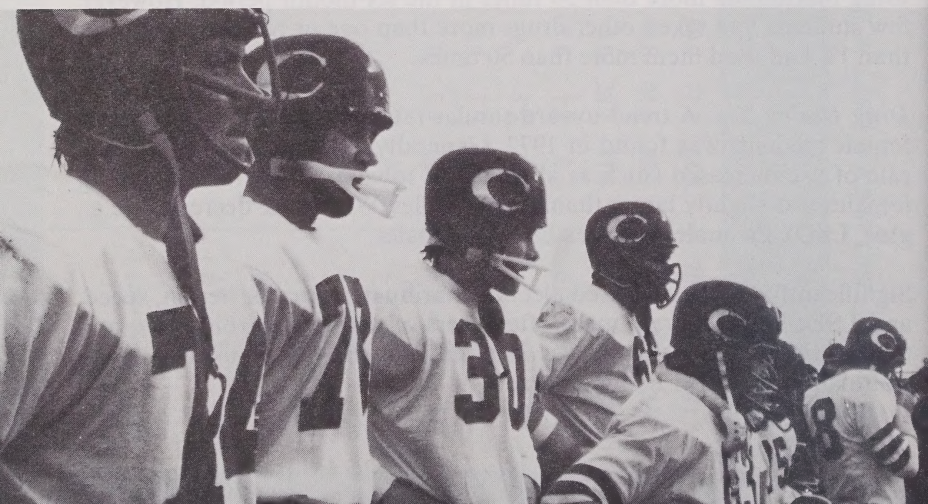
Significantly more males used alcohol, marihuana, opiates, heroin, speed, and LSD. Females were more often users of solvents, barbiturates, and tranquillizers. There was no sex difference in the use of tobacco, glue, stimulants, and other hallucinogens.

Male users also took a number of drugs more frequently than female users. Heavier use by males was reported for alcohol, tobacco, marihuana, speed, and LSD. Female users took stimulants and tranquillizers more frequently.

Drug Use by Grade. Drug use was strongly influenced by the grade of the students in 1972. For many drugs, the rate of use increased substantially from Grade 7 to 9, then decreased slightly in Grades 11 and 13. A comparison with the 1970 data indicated that for most drugs peak use had shifted from Grade 11 to Grade 9. Use of each drug in 1968, 1970, and 1972 by students in Grades 7, 9, 11, and 13 is shown in Table 2.

Drug Use and Subject Average. A significant relationship was found between overall subject average in school and use of all drugs. With the exception of alcohol, the tendency toward use and frequency of use decreased as the student's subject average increased. The same pattern was found in 1968 and 1970. Drug use was extremely high among those students who had an average of 50% or less. (For example, the rate of LSD use among this group was 16.3% compared to only 2.8% among those who reported an average of 75% and over.) The pattern of use for alcohol differed in that the highest proportion of users was found among those who had an average between 51%-65%.

Drug Use and Father's Occupation. In the earlier studies, drug use had been more common among children with fathers in professional and managerial occupations. The children of semi-skilled parents were less



likely to use drugs. In 1972, two new occupational categories were added: students with unemployed fathers and those with no fathers. Children in these latter categories had higher rates of use for a majority of the 13 drugs than children with fathers in other occupational categories. However, when these two groups were excluded a pattern similar to that seen in the earlier studies was found.

The Relationship between Drug Use and Lie-scale Scores. A nine-item lie scale adapted from the Eysenck Personality Inventory was included to test the validity of students' responses. Those with high lie-scale scores (i.e., the students who were least honest in their responses) reported drug use rates similar to those with low lie-scale scores for seven drugs: glue, other solvents, heroin, speed, stimulants, LSD, and other hallucinogens. The "less honest" students reported a significantly lower rate of use for alcohol, tobacco, marihuana, tranquillizers, and barbiturates but a higher rate of opiate use.

Students with high lie scores had little overall impact on the results. The largest difference occurred with alcohol and tobacco use. In both cases, a difference of only about 1% was found between those with high lie scores and the total sample. This suggests that even if some students might have given dishonest answers, their inclusion in the study had little effect on the overall results.

Changes in Drinking Behavior. The Grade 9, 11, and 13 students were asked whether their drinking habits changed as a result of lowering the legal drinking age. Approximately 41% of the students claimed they drank as frequently before the law was changed as they did after, 20% reported an increase, 4% a decrease, 9% started since the law was changed, and 27% claimed they did not drink. The largest increase in drinking was reported by those who drank two to five times per week, with 46% reporting an increase. The majority of those who reported starting since last summer were relatively moderate drinkers (one to two times a month).

Discussion

The use of illicit drugs such as marihuana, LSD, opiates, speed, other hallucinogens, glue, and other solvents did not change dramatically during the past two years. Marihuana use increased slightly, but use of the other illicit drugs stayed about the same or decreased. Reasons for this relative stabilization are difficult to pinpoint at this time. One reason could be

increased preventive-educational efforts which have taken place in the schools and through the various media. However, no educational programs in Toronto have been adequately evaluated to determine their effectiveness. Illicit drug use has been described as the "in" thing to do and like most fads, illicit drug use may have ceased to be novel.

Probably the most notable change which occurred during the past two years involved the use of alcohol. Alcohol use increased by about 10% during this period. So about 71% of the students in Grades 7, 9, 11, and 13 presently drink at least once a month.

The relationship between social, demographic, and educational variables found in earlier studies showed some small changes in this study. The trend toward similar male and female drug use patterns continued between 1970 and 1972, although some drugs are still sex linked. The pattern of drug use among the various grades changed from 1970 to 1972 so that the most recent pattern is closer to that found in 1968. Use of many drugs (i.e., opiates, heroin, speed, stimulants, tranquillizers, and LSD) is more prevalent in Grade 9 than at other grade levels, although alcohol and marihuana are still used by a larger proportion of students in Grades 11 and 13 than in Grade 9.

In conclusion, then, illicit drug use among Toronto students appears to have stabilized over the past two years. Alcohol now appears to be the drug of increasing popularity. Future educational and preventive programs will now need to focus more heavily on alcohol use and abuse than on just illicit drug use.

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DDICTION RESEARCH FOUNDATION OF ONTARIO

Dealing with the abuse of alcohol and drugs has been characterized by an incredible and often contradictory range of recommended solutions. The way out of the chemical dilemma runs the gamut from legislative control to informed personal choice.

The riddle is compounded by the realities of conflicting values, new information, and constant change in the context and climate of society. In its "Report to the Nation" a few years ago, a United States commission appeared to commend a national capitulation to prevalence of alcohol use in society. Hope, it seemed, was to be found by improvements and increases in the occasions and opportunities to purchase and consume beverage alcohol. One aim was to diminish the mystique and preoccupation with drinking by establishing norms for the circumstances, frequency, and amounts consumed. In short, *responsible drinking.*

More recently, with the rapid increase in the chemical inventory, social and cultural rationales for drug use have almost mimicked those conclusions by espousing the concept of personal freedom, responsibility, and "appropriate use." Both points of view conflict with the evident relationship between overall consumption and consequent personal and social damage.

Research, treatment, and educational programs—important in developing social policies and controls—have tended to focus on prevalence and incidence of alcohol and drug abuse. However, an alternative which seems forgotten in the debate is *non-use.* When alluded to, non-use often gets brief, even condescending mention as an option. While our knowledge about the drug age increases every day, much less is really known about those for whom chemicals, whatever the substance and circumstance, have little or no relevance.

There *are* people who do not drink alcohol. There *are* kids who are not into drugs. More needs to be known about, and heard from, those whose lives are founded on convictions instead of chemicals. There is a place for a viable and articulate position which could be called, in short, *responsible abstinence.*

L.A.P.

editorial

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addictions

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Femininity by the Bottle

by SHARON C. WILSNACK

Psychologists who study the effects of alcohol on human behavior usually limit their research to the male drinker. This bias may reflect the fact that male drinkers are easier to study. For example, more men than women are hospitalized for alcoholism, so it is much easier for researchers to gain access to male alcoholics than to female alcoholics. For researchers

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interested in social drinking, male drinking situations, such as fraternity stag parties, are far more common than female drinking situations. A moralistic attitude toward female drinkers may explain some of this neglect, or perhaps a feeling that studying men is more "important," since the effects of problem drinking are usually more visible for men than they are for women.

Whatever the reasons, most researchers study only men. They simply assume that their findings apply equally well to women.

The presumption that men and women drink for the same reasons runs through most of the literature on drinking. For example, David McClelland and his associates gathered a wealth of evidence that men drink to satisfy their need for power. McClelland presented his findings in a book titled, appropriately, *The Drinking Man*—the studies employed only male subjects. [For a summary of results, see "The Power of Positive Drinking," PT, January 1971.] McClelland admitted that his theory might not apply to female drinkers, but many of his arguments assumed that men and women drink for the same reason. At one point, McClelland noted that men drink more heavily than women in every culture. He explained that most societies expect men to be more self-reliant, assertive, and achievement-oriented than women. The men, consequently, are more likely to develop excessive concern with their personal power.

McClelland's study of male drinkers showed that alcohol increased thoughts of having impact on others, of aggression, of sexual conquest, of being big, strong, and influential. Drinking can, in effect, enhance a man's sense of power. Women, since they are not expected to be concerned with power, naturally would drink less. Implicit in this argument is the idea that women experience the same feelings as men do when they drink.

William and Joan McCord and other researchers tested hypotheses derived from a psychoanalytic theory of drinking. They claimed that men and women drink to satisfy dependency needs. The drinker who nurses a martini, the theory says, returns to the oral pleasures of suckling at his mother's breast, in a setting that allows him to maintain a façade of adult independence and assertiveness. Like McClelland, McCord and McCord restricted their study to male drinkers. In a brief section on female alcoholics, they speculated that fewer women drink excessively because women have more culturally approved opportunities to *be* dependent.

For them, it is all right to surrender to and receive support from a strong controlling spouse. Consequently, they do not feel the need for the artificial sense of feeling cared for and nurtured that male drinkers seek in the depths of a bottle. McCord and McCord made the same assumption that underlies McClelland's studies—they assumed that men and women experience the same feelings when they drink.

Warm, Loving, and Sexy

When I began to do research on female drinkers, I encountered evidence suggesting that women do not experience enhanced feelings of power or dependency when they drink. In a small pilot study I asked 20 young women to list 10 adjectives that described how they felt after having two drinks. They reported that they felt warm, loving, considerate, expressive, open, pretty, affectionate, sexy, and feminine. Most of the adjectives they listed seemed unrelated to either power or dependency. Instead, the adjectives suggested that social drinking produces a sense of enhanced "womanliness."

I found support for the hypothesis that women drink to feel feminine when I reviewed the literature on female alcoholics. Several studies suggested that female alcoholics were concerned about their adequacy as women. Some psychologists said that these women suffered "role confusion," "masculine identification," "inadequate adjustment to the adult female role," or "poor feminine identification." Other investigators found that a great number of alcoholic women grew up in homes where the mother was domineering and emotionally distant and where the father was weak, passive, and pathological. This kind of family structure might cause the daughter to feel insecure about her own sex role. The alcoholic would drink to alleviate her confusion.

I subsequently conducted an experiment to test the validity of these theories about female drinkers. I used the basic procedure that McClelland developed to study social drinking: I threw a party—in fact, several of them. I told subjects that I was interested in the effects of a party atmosphere on fantasy. I showed each group of guests five pictures at the beginning of the party and asked them to write stories about the people in the pictures. The photographs and drawings were simple but ambiguous. For example, one pictured a family running in the surf at a beach; another showed two women in a laboratory, studying a test tube. We repeated the game at the end of the party with a second set of pictures.

The game was a modified version of the Thematic Apperception Test (TAT), which studies have shown can reflect subtle changes in feelings and attitudes. Small amounts of alcohol do not usually produce gross changes in behavior, so I needed a sensitive indicator in order to detect the effects of social drinking on people's thoughts and feelings.

Informative Party Games

Approximately six women and eight men attended each party. The female subjects were either Harvard summer-school students or college graduates employed in the Boston-Cambridge area. Two hosts served alcoholic beverages at the wet, or experimental, parties. The guests could drink as much as they wished of whatever they wished. Each drink contained one and a half ounces of 86-proof alcohol. The bartenders recorded the number of drinks consumed by each guest. The women drank an average of three ounces of alcohol during the party. I also staged a series of parties at which the bartenders served only soft drinks. These dry, or control, parties allowed us to separate the effects of alcohol on fantasy from the effects of the party atmosphere itself. Twenty-six women attended wet parties and 23 attended dry parties.

I collected the TAT stories at the end of each game session and then, after the party, turned them over to a panel of outside judges. The judges used several TAT scoring systems to code each story. In order to test the power hypothesis, judges looked for incidents in each woman's stories that expressed 1) vigorous action with impact on others, 2) concern with prestige or reputation, and 3) arousal of strong affective responses in others. McClelland, who developed this scoring system, also developed several subcategories for power imagery. The judges scored events that reflected *social power* (power for the good of others or for the good of a cause), and events that reflected *personal power* (power in the interest of self-aggrandizement, without concern for others).

McClelland found that men who consumed low to moderate amounts of alcohol told stories that were concerned with social power, while men who drank more told stories that were concerned with personal power. Since I did not expect the women at the informal parties to drink large amounts of alcohol, I predicted that if the power hypothesis were valid for women I would find an increase in the scores for social power.

A Different Story for Women

The data did not support the theory that women drink to feel a sense of power. Drinking had no significant effect on scores for social power, and it significantly decreased scores for personal power. I also examined the stories for content that might reflect sexual power (flirtation or seduction), aggression (physical fights), and other forms of power (running for office). Drinking decreased the scores on aggression and "other" power categories.

When scoring the stories for evidence supporting the dependency hypothesis, judges looked for incidents that involved 1) *resources* (acts of giving, willingness to give, or having resources to give); 2) *needs* (characters who were in need of help, support, or nurturance); and 3) *satisfactions* (characters who had been helped, or who had had their needs fulfilled). The data did not support the theory that women drink because they want to feel cared for or nurtured. Drinking did not affect the content of the stories on any of the three categories for dependency.

It was difficult to test the hypothesis that women drink to feel feminine. There is no TAT scoring system for "womanliness." However, there are two TAT codes that relate to certain psychological aspects of femininity. The first of these is the deprivation-enhancement code developed by Robert May.This code does not analyze the thematic content of TAT stories, as do the power and dependency codes. Instead, it focuses on the *sequence* of negative events (deprivation) and positive events (enhancement). May found that a man tends to write E-D stories in which initial success, pleasure, or excitement is followed by failure, loss, or "settling down." A woman tends to write D-E stories in which pain or sacrifice is followed by eventual pleasure or success. May suggested that the E-D sequence reflected the straightforward, assertive style that most persons view as masculine, while the D-E sequence reflected the more yielding style that most persons view as feminine.

I predicted that drinking would increase the number of D-E stories and decrease the number of E-D stories that the women told. The data gave some support to this hypothesis. Drinking significantly reduced the scores on E-D stories; the predicted increase in feminine D-E stories also occurred, but it was not statistically significant.

Breast-feeding and Stories

The second scoring system that I used to test the "womanliness" hypothesis was the being-orientation code developed by Sara Winter. Winter compared TAT stories told by mothers while they breast-fed their babies with stories told by mothers who had already weaned their babies. [See "Fantasies at Breastfeeding Time," PT, January 1970.] She found that the nursing mothers' stories contained significantly more references to positive feelings and fewer references to negative feelings; more themes of activities performed for the intrinsic satisfaction they offer and fewer themes of activities performed as means to other ends; more evidence of a sense of time in which past, present, and future events coexist and less evidence of a chronological sense of time; and fewer references to logical, cognitive acts (knowing, planning). High scores on the being-orientation code appear to reflect a sense of contentment with and spontaneous enjoyment of the present as contrasted, for example, with a more instrumental "doing orientation."

I suspected that the fantasies of women whose sense of womanliness had been artificially enhanced by drinking might resemble in some respects the fantasies of women engaged in an archetypically feminine experience—breast-feeding one's child. I predicted that drinking would increase the total score on the being-orientation code, and the data confirmed the prediction. The women who drank told stories that reflected change on all categories of the scoring system. Their total score on the being-orientation code increased significantly with their drinking.

One postparty TAT card pictured an adult figure playing with a child. The sex of the adult was ambiguous. I was surprised to find that the women who drank tended to perceive the adult figure as female more often than did the women who attended the dry parties. (In the preparty TAT stories there were no differences between how women at the wet parties and women at the dry parties identified ambiguous figures.) If we assume that seeing an ambiguous figure as a woman reflects an inner state of feeling womanly, then this serendipitous finding supports the hypothesis that drinking makes women feel more feminine.

If drinking enhances feelings of womanliness, then women who drink heavily should have stronger needs for these feelings than women who drink lightly. I predicted that, prior to drinking, heavy drinkers would score in a more "masculine" direction on masculinity-femininity codes than the light drinkers did.

The Stories Behind the Pictures

D-E Story (written by a **wet** subject after drinking). The TAT picture shows an attractive man and woman seated in a nightclub or bar.

The lawyer has asked his secretary out to dinner by accident. They were working overtime, and by the time they were finished it was way past dinner time. She had worked very hard, so he felt obligated to take her out. And he did. They went to that nice Spanish restaurant around the corner. At dinner, the lawyer finally realized what a find she was and asked her to marry him.

Comment. This story begins with deprivation imagery ("working overtime," "worked very hard," the lawyer's sense of "obligation") and ends with enhancement imagery—he realizes what a "find" she is and proposes marriage.

E-D Story (written to the same picture by a **dry** subject after a control party).

They are very rich and sophisticated, probably actors. The man is trying to impress the woman and vice versa. They are in a classy bar, and the man just gave the guitar player 10 dollars to play a romantic song. He probably does this for every woman he takes out, and she is used to it. She knows what he is after, and he is thinking that he's going to get what he wants. They will go back to his apartment, but she refuses him, crushing his ego. He becomes furious, and she takes a cab home...

Comment. This story begins with enhancement imagery ("rich and sophisticated," "classy bar," "romantic song," the man's expectation that "he's going to get what he wants") and ends—from the man's point of view—with deprivation imagery (his ego is "crushed").

Another feature of this story is its power imagery. The characters are trying to impress and influence each other; the man is trying to "get what he wants;" the woman exerts power over the man by refusing him and crushing his ego. This type of manipulative, exploitative personal power imagery, which decreased significantly with drinking, is totally absent in the Wet subject's story to the same picture.

High Being Orientation Story (written by a **wet** subject after drinking). The picture shows an adult (sex ambiguous) and a child standing with upraised arms in a forest clearing.

What is more bucolic than a day in September, a beautiful, crisp, sunlit day. And what more touching than a young mother and her son, playing in the forest. The young woman can become girl again and let her imagination run wild as she romps with her son. He has found a playmate who can follow him through his realms of fantasy. Are they birds, or airplanes, gliding through the air? The ray of sun, as if a spotlight, highlights them before an audience of squirrels, woodchucks and rabbits. And soon the perfect day will end, and mother and son will head home, enriched and united by their glorious day in the country.

Comment. Several features of this story are characteristic of "being-oriented" fantasies: the positive emotional tone of the story; the pleasure the characters derive from their spontaneous activities and from their relationship; the present-oriented nature of the story and the reference to the merging of past and present ("the young woman can become girl again"); the absence of deliberate, planned activities and, in fact, a suspension of logical, controlled thought ("let her imagination run wild," "realms of fantasy").

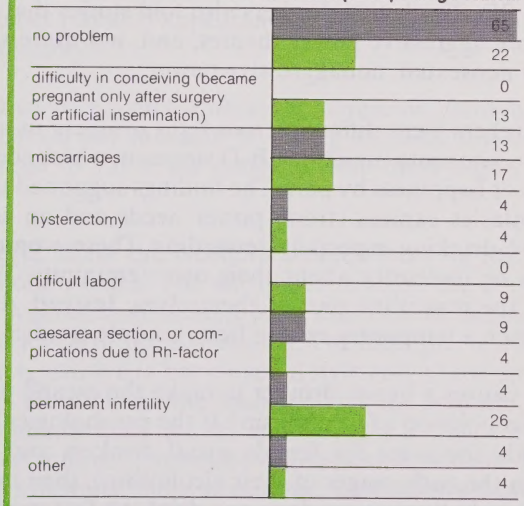
Low Being Orientation Story (written to the same picture by a **dry** subject after a control party).

It's Saturday in the spring, and on the front lawn of their rather imposing home Daddy, the New Haven Commuter, is getting exercise and togetherness with his son Timmy, a product of the finest Toddlers' School. Daddy feels guilty that he has been spending too much time reading Playboy and too little time being the companion-leader-model-father to his son. Daddy says, "How can I do this every

Saturday morning when I have all these stacks of computer cards to process and this month's Playboy is still unread?" Daddy's initiative will flounder, and Sonny will have to do his Saturday exercising himself.

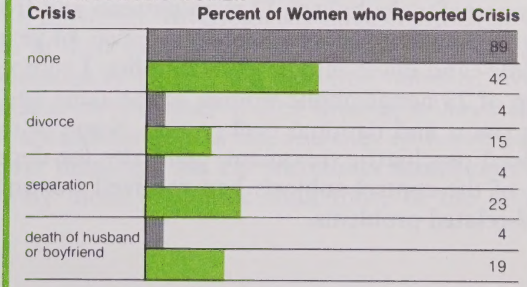
Comment. This story is characterized by the absence of positive feelings or spontaneous pleasure. The tone of the story is cynical, and the activity is planned and instrumental—the father spends time with his son in order to overcome his own guilt feelings. References to negative feelings ("guilt") and to work ("stacks of computer cards to process") are also common in low being-orientation stories.

OBSTETRICAL AND GYNECOLOGICAL PROBLEMS OF ALCOHOLIC AND NONALCOHOLIC WOMEN



Note: The alcoholic women's OB-GYN problems occurred prior to the onset of their excessive drinking.

EMOTIONAL CRISES IN ALCOHOLIC AND NONALCOHOLIC WOMEN



Note: For the alcoholic women, the crises listed occurred *before* the onset of excessive drinking.

NONALCOHOLIC

ALCOHOLIC

The High and the Mighty

I divided the women who attended the wet parties into two groups; light drinkers (those who drank three ounces or less) and heavy drinkers (those who drank more than three ounces). I compared the stories that they told during the pre-drinking TAT session.

There were no differences between the heavy and light drinkers on any measures of dependency. However, several differences emerged when I compared the groups' stories on concern with power. The heavy drinkers scored higher than the light drinkers on personal power at a near-significant level ($p = .06$). The heavy drinkers also told stories that contained significantly more aggressive power themes, and, not quite significantly, more themes of nonsexual, nonaggressive power.

Heavy drinkers were different from light drinkers in another way; they tended to write more masculine E-D stories in which success was followed by failure or happiness by pain. The findings suggested that young women whose fantasies express strong power needs and an assertive approach to life find drinking especially rewarding. These women may feel some confusion or insecurity about their own femininity. They do not drink to satisfy the masculine part of themselves. Instead, drinking may offer these women a temporary escape from sex-role conflict.

But what causes a heavy drinker to make the escape permanent, to seek the endless oblivion of alcoholism? If the psychological effects of alcohol are roughly the same for female social drinkers and female alcoholics (at least in the early stages of their alcoholism), then my findings suggest that the alcoholic woman does not drink to feel more nurtured, more powerful, or more like a man. She, too, drinks to feel more womanly.

To test this hypothesis, I conducted a study of 28 women who were receiving psycho-therapy for alcoholism, 12 as outpatients and 16 as inpatients. Their ages ranged from 29 to 63 (the average age was 44 years), and they came from middle- and lower-middle-class families. I compared the alcoholics to a group of 28 nonalcoholic women of the same age, education, socio-economic status and national background. Some of the control subjects had received psychiatric treatment, generally for depressive conditions, but none of the control subjects had received treatment for alcoholism or alcohol-related problems.

Alcoholics and Sex Roles

I hypothesized that alcoholic women consciously accept their femininity and share with other women certain traditionally feminine attitudes, interests, and values. Through questionnaires probing the alcoholic and nonalcoholic women's conscious views of themselves, I found that the two groups did not differ significantly. Both answered true-false items such as "I like to cook" or "Men have more opportunities than women to do things that are important and worthwhile" in the same way. They also achieved the same scores on a physical-appearance check list. (I assumed that, for many middle-aged women at least, the amount of attention a woman devotes to her physical appearance is one reflection of how much she values her femininity.)

The alcoholic women were significantly more "feminine" than their nonalcoholic counterparts on one measure involving attitudes toward *motherhood.* They appeared to value the maternal role more highly than the other women did.

On a conscious level, then, the alcoholic women were no less feminine than the nonalcoholic women. The alcoholic's conflict, the doubts about her adequacy as a woman, may stem from the existence of masculine traits in the unconscious levels of her personality. For example, a woman who is very assertive or aggressive in her personal style and whose unconscious sex-role identity is more masculine than the average woman's, probably senses that she somehow does not act and feel like a "real woman." On a true-false test that indirectly revealed differences in sex-role styles, the alcoholics gave significantly more masculine, or assertive answers than did the nonalcoholic women.

I used a modified version of the Franck Drawing-Completion Test to measure unconscious masculinity-femininity. I asked each woman to complete 11 simple line drawings. Psychologists have found that men tend to use sharp angles in their drawings; they close off open areas and frequently draw protrusions or extend the drawings outward. Women use more round shapes and curving lines in their drawings; they tend to leave spaces open rather than closing them off, and they elaborate inner areas of the drawings more than men do. The alcoholics' scores on the Franck test were significantly more masculine than those of the nonalcoholic women.

Obstetrical Disorders

I gathered information about each woman's family background, her occupational and marital history, and her drinking experiences. I discovered a striking difference between the medical histories of alcoholic and nonalcoholic women. Seventy-eight percent of the alcoholic women but only 35% of the nonalcoholic women who were married had suffered some kind of obstetrical or gynecological disorder. The difference is highly significant. The alcoholics' problems included difficulties in conceiving a child, repeated miscarriages, and permanent infertility (26% of the alcoholic wives were unable to have any children, as contrasted with 4% of the nonalcoholic wives). All but one of the alcoholics with reproductive problems expressed genuine disappointment about their inability to have children or to have as many children as they wanted.

Since psychological factors are thought to play a role in many types of obstetrical and gynecological disorders, it may be that the alcoholic women's childbearing difficulties are symptomatic of their disturbed sex-role identity. Or they may reflect an as yet undiscovered hormonal imbalance in women who are predisposed to alcoholism. What was clear from the interviews, however, was that in *subjective* terms the alcoholic women experienced these problems as chronic threats to their sense of feminine adequacy, and as crises that lowered their self-esteem and made them wonder what was "wrong" with them as women.

Several investigators have found that the onset of excessive drinking is more closely tied to specific life crises in female alcoholics than in male alcoholics. In the present study, 13 of the 26 alcoholic women I interviewed named a specific event in response to the question, "When you think back about your drinking, is there any one experience that was the beginning of your drinking problem?" In addition, 24 of the 26 alcoholics named specific experiences that shortly preceded the onset of their excessive drinking and that may have played a role in precipitating it. Divorce and separation were the most frequently named events. Others included the husband's death, marital problems such as the husband's extramarital affairs, obstetrical or gynecological problems, the death of a parent, and children growing older and more independent or leaving home.

Life Crises and Cocktails

Alcoholism in women is a complex problem involving an interaction of several types of variables—psychological, cultural, and perhaps biochemi-

cal. Obviously, many women experience marital problems, divorces, and reproductive difficulties without becoming alcoholics. In terms of *psychological* characteristics, women who become alcoholics in response to such stresses seem to fit a specific pattern; the potential female alcoholic experiences chronic doubts about her adequacy as a woman. These doubts arise in part from inadequate feminine identification on an unconscious level, and they may be enhanced by acute threats to her sense of feminine adequacy (marital problems, a miscarriage, children leaving home, and so forth). The potential alcoholic does not consciously reject her identity as a woman; instead, she consciously *values* traditional female roles. She may manage to cope with her fragile sense of feminine adequacy for a number of years, but when some new threat severely exacerbates her self-doubts she turns to alcohol in an attempt to gain artificial feelings of womanliness. Her excessive drinking may then begin a vicious circle that culminates in the alcoholic's characteristic loss of control over her drinking. Although she is trying, via alcohol, to feel more womanly, the typical consequences of heavy drinking—neglect of appearance, reduced ability to cope with the demands of home and family, disapproval of family and friends—eventually make her feel *less* of a woman. These new threats to her sense of feminine adequacy can cause her to drink even more heavily, until her nondrinking alternatives for feeling womanly are severely restricted and she becomes completely dependent on alcohol.

More research is needed in order to understand fully the relationship between feminine identification disturbances and alcoholism in women. For example, there will have to be studies comparing female alcoholics with women who have other psychological disorders, and studies of younger women with drinking problems who have not yet lost control of their drinking. There should also be some attention to the impact of the women's movement on female drinking. Perhaps women who learn to accept in themselves certain traditionally "masculine" personality traits will feel less of the conflict which alcohol soothes. Can liberation from traditional sex-role stereotypes in any way be an antidote for alcoholism? To answer questions like that, we will have to give some of the attention and concern we devote to male drinking problems to the drinking woman as well.

THERAPY AND THE PROBLEM OF VALUES

by DONALD MEEKS

This paper is devoted to a discussion of some problem dimensions which receive little attention in the literature—notably the complex of social values, attitudes, and behaviors that pose obstacles to rehabilitation. Problems that are, in my view, fruitful areas for intervention and investigation. While this paper focuses on heroin use and addiction, the thoughts apply to all areas of drug dependence.

Most of us would probably agree that the direction of therapy should be largely determined by a differential assessment of problems that impinge on the functioning of the drug abuser. Likewise, most of us would probably agree that narcotic problems cannot be viewed as a single or unitary phenomenon. At the very least we are referring to mechanisms which make the substances available; to patterns of use; to various social and psychological precursors and effects; and to pharmacological factors associated with narcotic use. We are referring to a variety of personalities and to a variety of social situations.

In addition, drug-using behavior is deeply rooted in the conceptual framework—or framework of values—of the society or group. A social value

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Dr. Meeks is Associate Director of the Addiction Research Foundation's Clinical Institute in Toronto and Professor of Social Work at the University of Toronto. This article is adapted from "Methadone in Relation to Other Modalities of Therapy" presented at the Methadone Conference of the Non-Medical Use of Drugs Directorate, National Department of Health and Welfare, Ottawa, January, 1973.

may be defined as a selection of the preferred from among the various modes, means, and ends of action. Values in relation to drug use are differentiated among members of the general community, differentiated within the helping professions and among users.

In respect to professional values there seems to be one main area of agreement. The primary target of intervention is the user. More specifically, the *head* or *body* of the user. While environmental influences are recognized, the primary locus of drug problems is considered to be internal. This conceptualization determines not only the primary targets of intervention but also the cast of experts and the allocation of resources to combat the problems.

Our value framework defines reality for us, tells us what reality is. If we conceive environmental variables to be at least as influential as psychological or metabolic variables, we will begin to direct much more attention to external forces. I would like to focus for a short while on environmental forces, first in relation to the influence of social values on therapy.

Therapy is offered as a positive approach to narcotic abusers within a social-value framework that is essentially negative toward their drug use and toward them. They are viewed simultaneously, or sequentially, as criminal and sick. This ambivalent posture is best exemplified by compulsory treatment settings. But, in general, public funds expended in therapy are not expended simply to help narcotic dependent persons but also to move them in the direction of the core values of the group, to bring them into line with social expectations. Inadvertently, or consciously, helping agencies endeavor to combine the function of therapy with the function of social control. Said another way, the public mandate conferred on helping agencies is not simply to help but also to reduce or eliminate use of drugs deemed harmful or illegal. When the mandate of social control is combined with the medical concept of cure, abstinence becomes the overriding goal of therapy. Needless to say, helping a given person may not be synonymous with reducing or eliminating his drug use. It is our fear that the provision of help to a continuing user will support him in his use and support the drug problem in general. Our outcome statistics

suggest that the problem is being supported without our assistance.

What are some implications of tying our destiny and that of the opiate abuser to the immediate or eventual goal of abstinence? One implication is that abstinence—or the pledge to it—becomes the usual ticket to assistance. Not only do we frequently refuse help to the person unable or unwilling to give up his drug but we also enumerate his unwillingness or inability as our therapeutic failure. To paraphrase Alfred Freedman, our commitment to abstinence as the supreme goal has led us frequently to seek therapeutic failure in the name of morality. When therapy means giving up the drug, we are involved in one of the few therapeutic enterprises in the world where a sizable percentage of clients are being therapized against their will. One of the few enterprises where, despite prognostic indications of chronicity, failure to maintain abstinence one year hence denotes therapeutic failure.

What I am suggesting should not be interpreted as giving up. It seems imperative that we investigate the circumstances under which success should be tied to abstinence and when it should not. For what incalculable percentage of our clients can improvement be measured in other ways? To what extent are we prepared to accept some degree of chronicity? To what extent are we prepared to provide medical, social, and psychotherapeutic support to those who are not ready to give up their drugs? Are we prepared to develop some programs that are geared toward reducing the secondary effects of drug dependence?

What influence will such different programs and measurements have on our concepts of success or failure? One program sponsored by the Department of Psychiatry of the New York Medical College deserves attention. This program focused on improving social functioning without an equivalent emphasis on abstinence. Accepting chronicity in some addicts, they set such specific goals as improved health and improved functioning in family, employment, and community activities for both addicts and their families. They provided services despite the continuing drug use of their clients. Efforts were made to separate out those who were "ready" for therapy aimed at abstinence from those who were not. As I have suggested, this

would seem to first involve drawing distinctions between the therapeutic and social control functions of helping agencies and, secondly, to put therapy into perspective as a process impossible of success without the commitment and investment of the subject.

In developing present programs our hidden agenda seems to be stamping out drug dependence in the same way that we stamped out polio. It should be noted, and not facetiously, that not many people with polio wanted it. It was not illegal. It was not habit-forming and, to my knowledge, there were no polio pushers available to create or sate a public appetite for the condition. A myriad of social and emotional factors preclude the application of a vaccine concept to our field.

In the field of narcotic abuse both legal and medical definitions of criminality and sickness are rooted in social definitions. Our own history reveals that criminality and sickness are not necessarily inherent in narcotic use. We have now arrived at a juncture where non-conforming drug use is equated with illness. But such attitudes often overlay the taint of sin. The provision of help is tied to salvation in social value terms. Even long-term, perhaps, life-long, support on methadone is inimical to our shared values.

A paralled tendency has been to subsume broad medical, psychological, and social concepts under one or another set of theoretical constructs. As a consequence, the problem complex begins to meld into a sort of blurry "mess." Conceptualizing opiate dependence as a medical problem we sometimes find ourselves inappropriately seeking chemical solutions to social problems. Conceptualizing opiate dependence as a socio-behavioral problem we sometimes find ourselves seeking psycho-social solutions to bio-medical problems. Chemotherapy may intervene effectively in metabolic disturbances but it may have limited applicability to intervention with troubled families, skeptical or rejecting employers, or in a total life style that may require drastic modification. By the same token it is unlikely that mind-upon-mind therapy will often succeed in blocking the effects of heroin. Most of our views—medical, psychological, social—have derived from clinical orientations too limited in scope to accommodate the multiplicity of factors involved. Needed is a conceptual framework which does not strain itself to contain understanding.

One theoretical framework which commends itself to me is that of social deviance. It is not a framework for treatment but a framework which lends itself to understanding. Social deviance theory employs the value framework of the society as its point of departure. Deviance refers to behavior that exceeds the tolerance limits of the group and is therefore felt to require control or punishment of the offender. Of the wide range of acts perceived as intolerable, annoying, offending, disgusting or threatening, some go too far. They are singled out as behaviors that threaten the group's sense of order and decency. They are behaviors about which something must be done.

Except as we arbitrarily define the problems, the deviant drug user does not necessarily suffer from medical or emotional illness. At the same time, medical and/or socio-behavioral problems may be associated with deviant drug use. It is the deviant behavior rather than medical or psycho-social pathology that provides the common denominator.The user is not automatically a patient by virtue of the behavior but the potential for social, emotional, and medical complications are apparent. A number of theoretical orientations can be applied singly or in collaboration to deal with a broad range of problems. The theory supports a comprehensive view of drug problems.

Importantly, deviance theory shifts attention from an exclusive focus on the individual user to include the rule-making, judging, rule-enforcing group. The social audience becomes a dynamic part of the problem. Intervention is directed not only toward the user but toward his transactions with others in the process of rehabilitation.

Social attitudes and behaviors may play an important role in supporting or blocking his efforts to help himself. Social attitudes and behaviors are influential throughout his drug-using career. For security, protection and support, deviants tend to move into close association with others who deviate. Members of deviant groups develop a rationale to support what they do. They develop common symbols, including language, to support a deviant identity. They develop education, skills, and techniques in deviant

acts. They reinforce a feeling of "we" against "them." They become skilled in manipulative—sometimes illegal—behavior to obtain their drugs, to survive, and to avoid apprehension.

In short, they may develop in deviant sub-cultures many of the behavior traits that we have, in other contexts, described as the addictive personality. And they bring these symbols, these learned behaviors, these apprehensions or paranoia, these manipulations, in sum this culture into the middle of whatever we call therapy. All too often, professionals are not "worthy adversaries" in using this culture therapeutically. When they are the "Keepers of the Gate" they should open it wide to permit entry of all who can bring other forms of expertise. Intervention in drug use itself is but one aspect of intervention in this deviant life style. And by the same token, a change in life style is unlikely unless significant efforts are made to facilitate entry or re-entry into other spheres of social activity. For the young client, it seems important to develop programs that prevent his indoctrination into and acceptance of the sick patient role—programs aimed at establishing a vocational identity, education and job placement, that lead him toward conventional activity before he becomes entrenched in a deviant identity.

In action as in principle it seems important to heavily stress active intervention in the life of all clients, in providing occupational or educational opportunities, and in reducing pressures in other areas of social functioning. This may range all the way from negotiations to advocacy on behalf of patients. This implies the development of a "second front" in the community to supplement what goes on in the agency. It also implies a re-examination of some of our propaganda. By underlining drugs as a form of evil, we may reinforce the notion that the user is evil as well. Such messages delivered in the name of prevention may, in the long run, be self-defeating insofar as the goal of rehabilitation is concerned.

I give emphasis to active intervention in the environment because, as I have stated earlier, most programs focus primarily on changing the deviant drug user himself. Little attention is paid to the environment. Grouped by goals and objectives, present programs include:

1. Those aimed toward total abstinence without the use of substitute drugs or narcotic antagonists;

2. Those aimed at abstinence from the drug of abuse through drug substitution or through the use of narcotic antagonists;

3. Those few aimed at improved social functioning with, or without, an emphasis on abstinence;

4. Those, notably in England, permitting legal prescription of heroin and other narcotics.

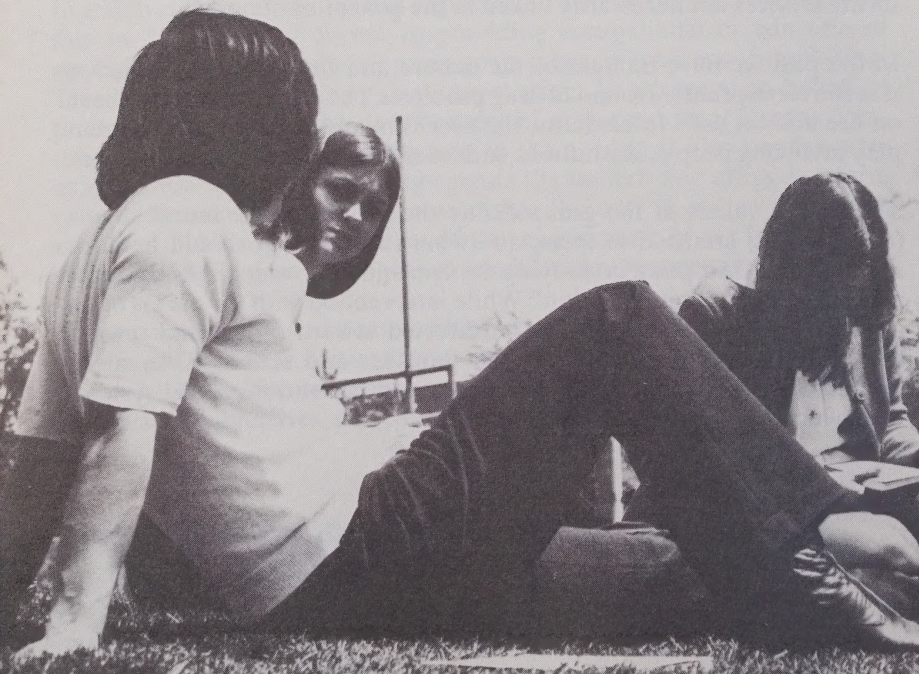
While problems at the interface of user and social groups are not ignored, they are subordinated to efforts to treat or change the user. It is likely that all of these approaches, and some imaginative ones not yet tried, will have value, each for some, but none for all narcotic abusers. As suggested by the Le Dain Report, alternative program responses would seem to be most desirable. As an integral part of these programs, research designed not simply to measure effectiveness but to measure effectiveness in relation to particular patient characteristics seems essential. We should also be interested in investigating characteristics that would seem to indicate services not necessarily linked to the goal of abstinence.

In the past we have thought of the culture and the values contained in it as the conceptual surround of drug problems.The primary foci have been on use and on user. In actuality, the user is involved in a dynamic interplay involving people, institutions, attitudes, self-concepts, and behaviors.

The shared values of the group define the problems, the moral stigma (or lack of it) attached to them, and what (if anything) should be done about them. Absorption in studying the user and intervening in his internal problems reflects "tunnel vision." While intervention with the user is often essential, intervention may also be directed toward others and toward the conceptual systems guiding their thoughts and actions. Ultimately, the real drama is at the interface of user and the various social systems with which he is in contact.

Concepts of Adolescence

by A. S. Alissi



Not long ago, a newspaper article carried a caption, "Astrologer Charts Teen Scene: New Key to Generation Gap?" The article gave an account of a Los Angeles astrologer who used the changing planetary relationships in the cosmos to explain the generation gap, dropout scene, hippy move-

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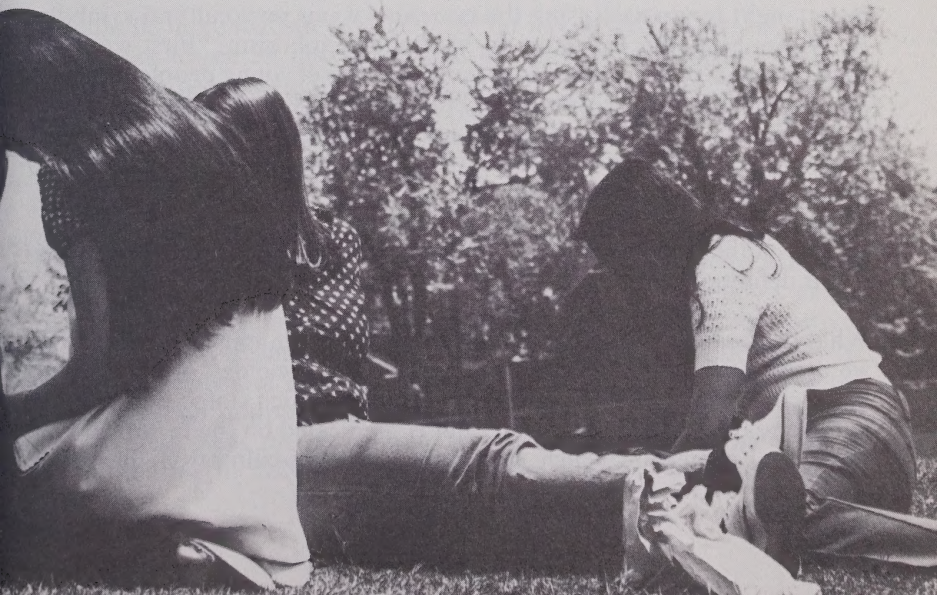

ment, and rebellion on the campuses. The planet Venus which is a sign of love and a strong force in this era was used to explain the flower children's search for love and the existence of a love generation.

The theory is indeed inviting, but perhaps falsely assures us that whatever our quandary may be, it is not of our own making. It is also discouraging to think that man will never be able to affect such phenomena until he has the wherewithall to manipulate the planets—which is, to use an apt phrase, an Herculean task. Although there are people who take this view seriously, the unique appeal of such simple, self-contained theories become more obvious as we engage in our own struggle in this paper to review some of the modern-day prevailing concepts of adolescence.

Our brief overview will highlight some of the more plausible concepts and theories which may be applied to the full range of adolescent experiences. Although these may appear to be refined, and "established," we can be misled if we fail to take into account certain built-in problems in conceptualizing. Actually, the development of effective conceptual tools has been a slow and tedious process in the behavioral sciences. Simply we have been unable to invent adequate means to portray social reality in its totality.

This should not surprise us however for it is true that we never see things in their total concreteness. We see only certain aspects—those that we have been taught to abstract using the currency of our own cultural symbols. As Walter Lippman expressed in his famous aphorism, "First we look, then we name, and only then do we see." A group of young people standing arm in arm cluttering entrances to buildings and singing songs in unison brings certain reactions after they are defined as "demonstrators!" The responses would indeed be different were they defined as strolling Carolers, bearing messages of good cheer.

This is another way of saying that we do not respond to stimuli but rather to our definitions of the stimuli.

What passes for knowledge and understanding then must centre on how we arrive at these definitions. In exploring the sociology of knowledge, Manheim introduced the notion of *relationism* which stated that truth is not necessarily a fixed commodity but is predicated on the historical and situational context in which it is found. As cross-cultural studies have

repeatedly demonstrated, our own involvement and narrowed cultural frame-of-reference in a sense institutionalizes our own distortions of the truth. As Hall puts it, "Culture hides much more than it reveals, and strangely enough what it hides, it hides most effectively from its own participants" (20, p. 39). And so it is with the helping professions where even the most careful descriptions of adolescence are not automatically objective—for all behavioral definitions have pre-established connotations. The mere fact of describing a particular adolescent behavior as "ambivalent" reveals a psychoanalytic conceptual bias. We must, therefore, be sensitive to our own frame of reference which is, as is true of all social inventions, subject to time and place distortions.

In short, what we see or ignore depends on the concepts available to us. We have a ready-made "package deal" set of concepts when it comes to American teenagers. We thus have an image of the teenager which serves as a prophecy we are altogether too eager to fulfill as selected aspects are highlighted and others blotted out that are not conveniently covered by the label. The prefabricated conceptual molds and packages come in all sizes and shapes. One set forces us to recognize anti-establishmentism, the generation gap, and contradicting sub-cultural values. A second set calls attention to dependency, ambivalence, psychosexual conflicts, resurging Oedipal conflicts. And still another sets us searching for anomie in the social system, status deprivations, and role confusions.

It would be more realistic to develop a "do-it-yourself concept kit" which would seek to see all that is possible by applying a blend of concepts selected not because they are pre-established in our minds but because they are tailored to account for the particular behavior in question and are therefore closer to the truth of the matter.

This is, in my estimation, the hallmark of the professional—an ability to find and apply the most workable combination of concepts tailor-made to fit the problem at hand. It follows then that this capacity will vary depending on the range and depth of his repetoire. No matter how creative he may feel, a mechanic cannot do much with only a Phillips screwdriver and pair of pliers. Similarly, those with a limited inventory of narrowly-focused concepts and theories will be handicapped in that they lack the range necessary to apply to real-life problems. The richer the repertoire of conceptual tools the practitioner has at his disposal, the more likely he will be able to discover the combination that will be successful for

understanding and dealing with practical problems.

Scientific Concepts

The behavioral sciences have for sometime now been searching for concepts, hypotheses, and theories which will effectively integrate both psychological and sociological explanations of behavior. While human behavior involves both aspects, the distinctive ways in which the sciences have grown has consistently favored separate approaches. The study of adolescence has similarly been influenced by these developments and for this reason are perhaps better understood when examined in terms of these traditional fields of study.

Adolescence as a Stage in Individual Development

The earliest efforts to establish a separate psychology of adolescence can be traced to G. Stanley Hall (19). Extending Darwin's evolutionary doctrine, Hall's theory of recapitulation held that each individual grows through stages of development which reenacts or recapitulates the history of mankind. Where infancy reenacts the prehistoric stage, and childhood the cave-dwelling stage, adolescence reenacts the transitional stage which is characterized by rebellion, storm, and stress. Hall was optimistic about adolescence for he held that if any higher stage of development of the race were to occur, it would not come out of adult life but would come through increased development of the adolescent stage which was in his words "the bud and promise for the race" (21, p. 50).

Biological determinism is also evidenced in the work of Arnold Gesell (17) whose descriptions of age trends have been widely accepted as norms in the United States. In his view, the basic direction of growth is fashioned by maturational forces and developmental changes which oscillate along a spiral course through progression and partial regression. Fairly detailed descriptions of adolescent physical and mental development from year to year are spelled out which are characterized by alternating stages of calmness and storm. Wilfred Zeller (3) introduced the idea of a *body gestalt* to signify the changes in the total complex of body functions which accounted for corresponding psychological changes. Secondary sex characteristics at puberty, for example, involve more comprehensive body changes leading to disharmony of body gestalt resulting in increased impulsivity, nervousness, and over-critical attitudes. To the followers of Ernst Kretschmer (3), on the other hand, predispositions to major psychological tendencies corresponded to body types and hence the degree of turbulence

found in adolescence was sufficiently explained by the existence of differing body types.

The more psychologically orientated approaches tend to highlight specific kinds of experiences relating to personality development, cognition, values, perceptions, and attitudes. Oswald Kroh (3), for example, was impressed with psychological aspects of consciousness at different stages of development and advanced the concept of *phase structure* to emphasize the totality of personality throughout the process. In his view, the adolescent personality develops a theoretical view of the world and deeper understanding of life. On the other hand Edward Spranger (3) saw adolescence as a period of transition in which a hierarchy of values is established. Three kinds of changes are inwardly experienced. There are radical and dramatic changes in self-perception, a gradual adoption of cultural values, and finally, an achievement of self-disciplined and actively-sought-after goals.

A most comprehensive examination of the development of cognition stems from Jean Piaget and his colleague Barbel Inhelder (23, 29). Systems of thought are, in their view, evolved from a gradual internalization of action. Whereas the child reasons on the basis of objects called *concrete operations,* the adolescent is able to reason on the basis of symbols or verbal propositions called *formal thought* or *propositional operations.* The stage of cognitive development the adolescent achieves involves the ability to deal with propositional logic, to grasp metaphors, and to reason about thought itself. From the developmental point of view, limitations and capabilities of adolescent cognition are intimately involved in all adolescent experience. For example, his ability to distinguish between what is and what could be permeates his social view whereas his newly found introspective powers may lead to heightened self-consciousness in his private view (11).

Herbert Cross (7) among others maintains that a person's concepts can be ordered according to certain patterns of organization into what might be called conceptual systems. Developmental progression is seen to move through degrees of abstractness from the concrete, inflexible, rigid to the abstract, flexible, and creative. Assessing an adolescent's conceptual level of development and the context of his training environment are both acknowledged as crucial variables in the adolescent experience.

Without a doubt though, the psychoanalytic theories continue to provide the richest source of concepts for understanding adolescence. The classical

psychoanalytic view of adolescence holds that the biological changes during puberty upset a balance which has existed between the ego and id during latency. Adolescence is a time in which the increased impulses confront a relatively weak ego. Most evident during adolescence is the resurgence of the oedipal complex which brings with it derivatives of pregenital drives, oral anal impulses, and aggressive drives. Related to the oedipal situation is the adolescent's task of freeing himself from the dependency of parents. Detachment from the incestuous objects is marked by rejection, resentment, and hostility towards parents and other authorities.

The meaning of eruption and turmoil during adolescence is important. Upset behavior is seen to be an external indication of internal adjustments taking place and these are taken to be signs of *normal* growth. Hence, the very nature of adolescence interrupts peaceful growth and it is therefore normal for the adolescent to be inconsistent, unpredictable, and to fluctuate between opposites. Conversely, when there is a steady equilibrium during adolescence, there is abnormality (16).

In general, adolescence seems to offer a second chance where new forces are released and restructuralization takes place. The orthodox psychoanalytic position has, of course, been modified by Erikson, Fromm, Horney, Sullivan, and others who emphasized the role of social factors in the developmental processes.

Erikson's (12) concept of ego identity in particular has stimulated much current interest. It has been said that the problem of identity is for our times what the problem of sex seemed to be for Freud's. As used by Erikson, the concept referred to the relationship between what a person appears to be in the eyes of others with what he feels he is. It represents the search for an inner continuity and sameness which matches the outer social circumstances.

The term identity crises was first used to describe a type of breakdown of inner controls found among a group of psychiatric patients. The same kinds of central disturbances were noted in conflicted young people who were experiencing a sense of confusion in themselves. Thus, the term identity crisis has taken on a normative meaning when applied to adolescence. The word crisis does not connote impending catastrophe but rather a necessary turning point at a "crucial moment" where development must move one way or another "managing resources of growth, recovery, and further differentiation" (13).

In the main, the identity concept concentrates on the fusion of a variety of elements such as identification, capacities, opportunities, and ideals into a viable self-definition. Adolescents vary in the tempo in which an identity is found. Some may crystallize identity too early or too narrowly to avoid diffusion. Others do not seem to find themselves and try out various identities existing in a kind of psychosocial moratorium.

In their clinical work, behavioral therapists have challenged this unconscious determinism of the psychoanalytic variety and argue that the symptoms or undesirable behavior patterns are learned in the same way as other habits. These can be unlearned by applying the same principles. As Albert Merhabian puts it, "It is easier to act yourself into a new way of thinking than to think yourself into a new way of acting" (27, p. 143). Whereas the various stage theories discussed assume that behavior can be categorized into relatively fixed discrete sequences related to maturational processes and socialization forces, the social learning theorists stress individual differences. Moreover, intra-individual continuities are noted in early development inasmuch as marked changes in behavior are seen to occur only as a result of abrupt alternations in social training and is rarely found in most individuals during the pre-adult years (2, p. 25).

Social Perspective on Adolescence

In contrast to the focus on the individual adolescent, the sociological approach focuses on the social and cultural determinants which in a sense create the adolescent condition. According to this view, social structure and culture in American society conjoin to induce adolescence which essentially is an experience of passing through an unstructured and ill-defined phase that lies between childhood and adulthood. This void or gap in the social structure stems largely from two factors: a finely established division of labor with its complex technical status structure; and, the failure of the cultural system to provide a meaningful ideology which would result in a strong identity and feeling of purpose. The emotional instability and general turbulence associated with adolescence arises then out of the indeterminate status of the adolescent in the social structure rather than from innate constitutional causes (31).

Certain sociological approaches do however share an interest in the developmental aspects of adolescence along with the stage theories previously discussed. According to John Barron Mays (25), the developmental tasks to

be achieved by the adolescent within society's unstructured framework includes efforts to somehow come to terms with society by getting an education, job, and starting a family; to come to terms with oneself in developing an identity, and individual talents; and to come to terms with life as a whole by acquiring a moral code and general religious beliefs. Robert Havighurst's (22) well-known list of essential developmental tasks more specifically point up skills, knowledge, and attitudes which must be mastered by the growing adolescent to avoid maladjustment and social disapproval in future years. To Kingsley Davis (9), adolescence represents a phase of development where physical maturity moves far ahead of social maturity. As society becomes more complex, the gap becomes greater and adult status is delayed as adolescence is prolonged despite physical and mental preparedness for adulthood.

Allison Davis (8) employed socialization as a key concept to refer to a continuous process of social reinforcement and punishment affecting growth and development. Fears of punishment resulted in what he termed *socialized anxiety* which serves to help individuals adapt to the demands of society. Socialized anxiety increases during adolescence as the adolescent faces new responsibilities while at the same time he is expected to delay normal gratifications. In the process, adolescents develop a new awareness of societal values. According to Davis, socialized anxiety, however, varied with social class which accounts for behavioral differences in the stratification system.

Victor Gioscia (18) used the concept of *achrony* to depict a general state of frustration where there is a gap between role of behavior and role of fulfillment of expectations in a social structure which simultaneously demands and prevents the adoption of adult status. He arrived at the concept in his study of adolescent drug addiction where it was seen that drug use produced an illusion of timelessness representing a kind of flight away from culturally accepted definitions of the normal flow of time. Adolescents in our culture, who have not adopted a set of norms which can be synchronized with the pace of modern urban culture, will be subjected to achrony.

Unless the social and cultural systems are altered, adolescence will continue to represent a period of instability which is more or less a normal state. Stable attitudes are difficult to achieve largely because societies only intermittently and in special cases give recognition to youth. The Komsomols of Soviet Russia, the Israeli Kibbutz, and the Nazi youth organiza-

tions serve as examples of how adolescence experiences can be structured politically and ideologically. While the exporting of American "teenageism" is recognized, adolescence is symptomatic of any well-developed and affluent society. England has its Teddy boys, Rockers, and Mods; Russia its stilyagi; Japan its thunder boys; France and Germany, their Americanized "teenagers" and so on. In this view, underdeveloped societies in the process of industrialization can expect to create their share of the adolescent phenomena in the future (32).

There is an aphorism that an adolescent is one who, if not treated as an adult, acts like an infant. If role expectations are poorly defined, the resulting confusions may induce the teenager to seek clear roles. If the adult status is not available, childhood behavior may be the only alternative.

A somewhat different view is presented by Edgar Friedenberg (15) who sees society as manipulating the adolescent into patterns of mass conformity. Society "dampens out" questioning, conflict, rebellion and all that is stressful during adolescence. Not having experienced the stress and strain, the adolescent is deprived of the opportunity to establish his real identity. Adolescence as a developmental phenomenon is minimized and is, in his view, *vanishing.* Current youth protestors with deep commitments may be positive reminders that idealism is not dead but is "entrusted afresh to each new generation" (25, p. 118). On the other hand, the "new alienation" has been interpreted by Kenneth Keniston as a "form of rebellion without a cause, of rejection without a program, or of refusal of what is without a vision of what should be" (24, p. 6).

The role of the youth culture or peer group in helping its members achieve full adult status is, of course, an important consideration. According to Eisenstadt (10), training in the family is insufficient for moving in the wider society insofar as it no longer is the basic unit in the division of labor, nor does it perform political, economic, or religious functions. Hence, family training in itself is not adequate for developing full identity and social maturity. Age-homogeneous youth groups serve in this sense to help in the transition from what is described as the "particularism" of the family to the "universalism" of the larger society.

The adolescent sub-culture then serves as a link between childhood and adulthood, and according to James Coleman (5) is fast becoming a distinctive life style with a language and value system of its own. Society is now not confronted with a set of individuals to be socialized into adulthood

but instead is faced with an adolescent social system which offers a united front in resisting adult intervention.

Finally, there is the phenomena of the youthful *counter-culture* as advanced by Theodore Roszak (31). The concept refers to an amorphous generation unit of dissenting young people who deplore the dehumanizing forces of a technological society with its accompanying credo "never let happen naturally and enjoyably what can be counterfeited by the technician." The counter-culture represents a "healthy instinct" refusing to participate personally and politically in practices which violate human sensibilities. In Roszak's words,

> *Most of what is presently happening that is new, provocative, and engaging in politics, education, the arts, social relations (love, courtship, family, and community) is the creation either of youth who are profoundly, even fanatically, alienated from the parental generation, or of those who address themselves primarily to the young.* (31, p. 1).

Doubtless, this brief overview of psychological and sociological perspectives does not represent a thorough review of the literature. By necessity it tends to highlight only certain features of the concepts considered, and therefore may be biased to favor our overall argument that we lack integrated comprehensive models for dealing with the real world. It might help for us to more broadly examine what appears to be currently happening to us to see what clues this might give us for moving toward more integrated approaches. The dialogue surrounding the generation gap might prove insightful in this regard.

The Generation Gap and the Current Dialogue

Many talk about the change in status from childhood to adulthood as though it were a discrete step forward resembling the pubescent rites of passage described in anthropology textbooks. This of course is not true, for our society has a system which is haphazard and ambiguous at best. Upon reaching the age of 12, children gain the dubious status of paying adult fares on trains and airlines and adult rates at movies and theatres. At 16, he is largely freed from the protection of child labor laws and is able to secure a driver's license but is seldom legally responsible as an adult. At 18, he can go to war, and indeed he may very well be forced to enjoy this privilege and yet he cannot enter a bar to drink, and in many states cannot marry without parental consent. On reaching 21, he

achieves the legal status of adulthood. But interestingly enough, a number of youth beyond this age are still financially dependent as they are forced to prolong their education and training in schools of higher education (6).

Much of our efforts to deal constructively with adolescence in modern society is based on the assumption that most of the problems associated with this stage of life will somehow disappear if we could only "bridge the generation gap" (1). This implies that the ideal relationship between the older and younger generations should be one of consensus and harmony. Further, it is assumed that the major responsibility for creating such consensus and harmony depends largely on the purposeful actions of the members of the older generation. Presumably, the gap to be bridged is one in which the older generation maintains a key role in the socialization process to insure that cherished values, knowledge, and skills are available to the younger generation. Success then implies the maintenance of a smooth functioning social system which is relatively free from disruption. This is sought in spite of how outmoded the social structure itself may have become. As one author put it, "More hung up on youth than any nation on earth, we are also more determined that youth is not to enter into history without paying the price of that adulteration we call adulthood." (30, p. 188).

But in many ways, today's adolescents prefer to be non-participants of the past and have indeed become "dropouts from history." In spite of pamperings, briberies, put-downs, tongue-lashings, and promises of a bright and shiny future, youths are refusing to reenact the past and may not even desire to keep the system intact. They are what Leslie Fiedler refers to as "the new mutants" who face life with a new logic of its own.

> *Not only do they reject the Socratic adage that the unexamined life is not worth living, since for them precisely the unexamined life is the only one worth enduring at all. But they also abjure the Freudian one: "Where id was, ego shall be," since for them the true rallying cry is, "Let id prevail over ego, impulse over order," or—in negative terms—"Freud is a Fink!"* (14, p. 207).

In contrast to his earlier counterpart, today's adolescent often feels no need to hide or disguise his rebellious deeds out of deference to God and motherhood. He announces his activities matter-of-factly with the subtlety of a sledge hammer. And his escapades contribute directly to the growing inferiority complex and amateur status of his parents.

And as the saying goes, the only premarital experiences current adolescents deny themselves is the experience of learning how to cook.

Others have suggested that perhaps society gets the kind of children it deserves or even secretly wants. Erikson, for example, stated, "If our children disappoint us, it is because the world we have created for them—which influences their values and perceptions—disappoints us even more" (28, p. 1). There are clear signs that youth has reached a level of disgust at having been made "scapegoats for adult apathy, indifference," and lack of honesty and courage in dealing with life's problems.

But perhaps our post-industrial society has signaled the beginning of a still more profound revelation which in Margaret Mead's (26) view represents an entirely new cultural stage in our history. Beginning with a postfigurative culture where children learned primarily from their forbears, and moving to a cofigurative culture in which both children and adults learned from their peers, we are now entering a pre-figurative culture in which adults learn also from their children. No matter how remote or simple the society, nowhere in the world are there elders who know what the youth know. Whereas in the past, the older generation could lend experience to guide youth through life, today's elders cannot provide this help because there simply are no guides. Youth, therefore, takes on a new authority in dealing with what is a mutually experienced unknown future.

The impact of this insight for adults is highlighted in an observation by June Bingham:

> *Those now over 40 were often burdened by their late-Victorian and preFreudian parents with a harsh conscience, a tendency to overblame themselves. They are sandwiched between a generation that questioned too little and a generation that questions too much. They themselves never had the white meat of the turkey. When they were children, the best parts were saved as a matter of course, for the adults; by the time they grew up, the best parts were being saved, as a matter of course, for the children. Having been children in an adult-centered world, they are now adults in a child-centered world."* (4, p. 427).

Our society is structured in accordance with our outmoded ways of thinking about one another. And our incapacity to learn to think differently leads to the suppression of some of our most vital elements. The rebellion of youth is mostly seen as a threat to an established order essential to the

well-being of adults. However, it is through the process of rebelling that the adolescent asserts his own self-identity and adds meaning to his life. In short, any upheaval is viewed negatively by the adult while at the same time it may be "functional" and beneficial for the adolescent.

One does not bridge the generation gap by merely eliminating tensions. The older generation has to make room economically, politically, and emotionally if the adolescent is ever to realize his own potential. But, this does not call for the full-blown free expression of adolescent rebellion and all that implies. Instead, one must create conditions whereby the social structure is supported or modified so that *both* the older and the younger generation can work through *their* conflicts within a relatively stable climate.

Doubtless, this will not occur easily. The conflicts between generations exist because we are consistent in the way we feel about one another. Changes will not occur until we are able to invent new ways of seeing, imagining, and describing ourselves relative to one another.

Synthesizing Concepts

It is not possible here to fully explore how to bring together the diverging concepts into more meaningful forms in practice. We may illustrate only a few areas where a conscious effort to integrate concepts in practice could lead to changing perspectives. Most essential in the process is the need to become aware of the basic assumptions underlying our services. This is important because unrecognized assumptions have a habit of blocking from our view new and unique potentials. They act as cultural blinders which are more costly in terms of what is systematically overlooked rather than what is specifically stated. We have become accustomed to think that orthodox Freudians set about to resolve Oedipal conflicts, Adlerians seek to alter compensatory strivings, Rankians try to resolve separation anxieties, Rogerians seek to bridge the gaps between the real and ideal self, while the Existentialists continue to reach for self-awareness.

The ways agencies organize around conceptual frameworks and institutionalize procedures to perpetuate them, reinforces conceptual bias and hampers efforts to integrate approaches. Thus, in spite of efforts to refer and co-ordinate services at all levels of practice, the fact remains that knowledge and skills developed in one approach are not available in usable form to those practicing in the other. The outcome is that the client remains fragmented in spite of even the most sophisticated efforts to develop services which intervene simultaneously at different target points.

The bridging of the generation gap, we have asserted, calls for the creation of stable conditions which will permit both adults and youths to work out tensions and provide youths with the opportunity to experience new statuses and roles. A step toward synthesizing our concepts would be achieved if we could organize our thinking around certain core themes. For example, if the focus is on providing opportunities for newly-created places in society for youths, then one could select across the traditional boundaries of behavioral sciences to incorporate what is known about the identity crisis with our knowledge of how the social structure is unfortunately patterned so as to prevent the emergence of meaningful statuses and roles. Instead of treating individual pathology or manipulating social systems, the aim would be on using knowledge of the social structure to come down to cases in directly helping the adolescent. The focus then will be on finding ways to help him search out his individual potential, not however as a passive participant in the social setting. Indeed, it is vital that he be encouraged to become actively engaged with other adolescents and with adults, changing expectations and creating new and meaningful transitional places for youth in the society.

One cannot overemphasize the need to view adolescents and adults as an interacting unit, for to separate them in our thinking distorts their true nature. Insofar as the interaction of the two become the basic unit of concern, new guides for development will become apparent. For example, this might move us away from the trend towards specializing services aimed at particular age groups.Those who typically work with adolescents may become less identified with them as it becomes apparent that success would depend more on developing skills in influencing the nature of *interaction* which exist between the younger and older generations.

Activities would be redirected at those points in everyday life where youths and adults come together. Most educational programs, youth-service agencies, and neighborhood and community centres will have to drastically revise their programs. This is a far cry from the traditional involvement of youth in such activities as youth councils which are so often characterized by adult manipulation, paternalism, and authoritative control. On the contrary, adolescents along with adults will have to share responsibility in the schools, agency centres, and in economic and political activity as well. The important point is that the adolescent become a contributing part of his environment with structured positions and well-defined expectations. This would suggest new positions in decision-making or policy-making groups, carrying responsibility for service projects, and economic

enterprises, lobbying for changing legislation, in short a greatly expanded involvement in *things that matter.*

Part of the focus would be on changing the adult's traditional expectations to encourage the acceptance of adolescent upheavals as a natural state of affairs in social relations. This may call for educational programs aimed at re-evaluating negative reactions which arise among adults and which tend to strain relations and cloud the real issues. It would suggest institutionalizing conflicts through new opportunities for community debate, and shared problem-solving activities in significant arenas where community standards influence the behavior of youths. In the search for individual solutions to the identity problem the adolescent would be encouraged to invent significant roles for himself in dealing with issues of concern.

It is admittedly difficult to project in any clear way how services might look if they were reorganized around different sets of concepts. Interestingly enough this in itself tells us something. We become so accustomed to the familiar programs and the traditional ways of thinking about them that even as they become outmoded or ineffective they continue to influence our judgment blocking easy access to new insights and fresh approaches.

Conclusion

We have stressed the need to create new social conditions to help both older and younger generations work out inter-generational tensions. The new conditions should also provide for the assumption of new statuses by the younger generation within a climate of stability. The means for achieving this vary according to the particular concepts and theories which are used. None tell the complete story nor do any correspond completely with the real world. It is, therefore, vital that the assumptions underlying them be fully explored, for in the final analysis they provide the distinctive flavor which characterize practice methods and techniques. The great task is modifying, combining, and integrating newer concepts into more inclusive frameworks which more realistically reflect life experiences.

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by
HELEN
ANNIS

directions

I would like to present here some reflections on treatment research—where I think we've been; what I think we've learned; and, based on these learnings, directions that look promising for the future. These reflections are drawn from the general area of treatment research, not specifically

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reatment research

from alcohol and drug programs. To limit discussion to the field of alcoholism and drug dependence would not only be unnecessarily restrictive but would also ignore a large body of knowledge arising from work with other groups (e.g., neurotics, psychotics, retardates, emotionally disturbed children, etc.). Under "treatment research," my focus will be on studies that are typically categorized as psychotherapy or behavior modification research.

Treatment may be broadly defined as "any planned intervention or technique applied to certain problems of an individual with the goal of effecting a specified change in the problem areas." Treatment is *planned, applied to a problem* with the *goal of change.* It is instructive to compare this general definition with Raimy's definition of psychotherapy—"an unidentifiable technique applied to unspecified problems with unpredictable outcome." (For this, he notes, rigorous training is recommended.)

The difficulties facing treatment research are obvious as with any attempt to build a body of knowledge about an *unidentifiable technique* applied to a wide variety of *largely unspecified, or at least poorly-defined, problem areas* with *vaguely defined goals or expected outcomes.* Indeed, perhaps the wonder is not why knowledge has not advanced more quickly, but rather how treatment research has been able to contribute as much as it has.

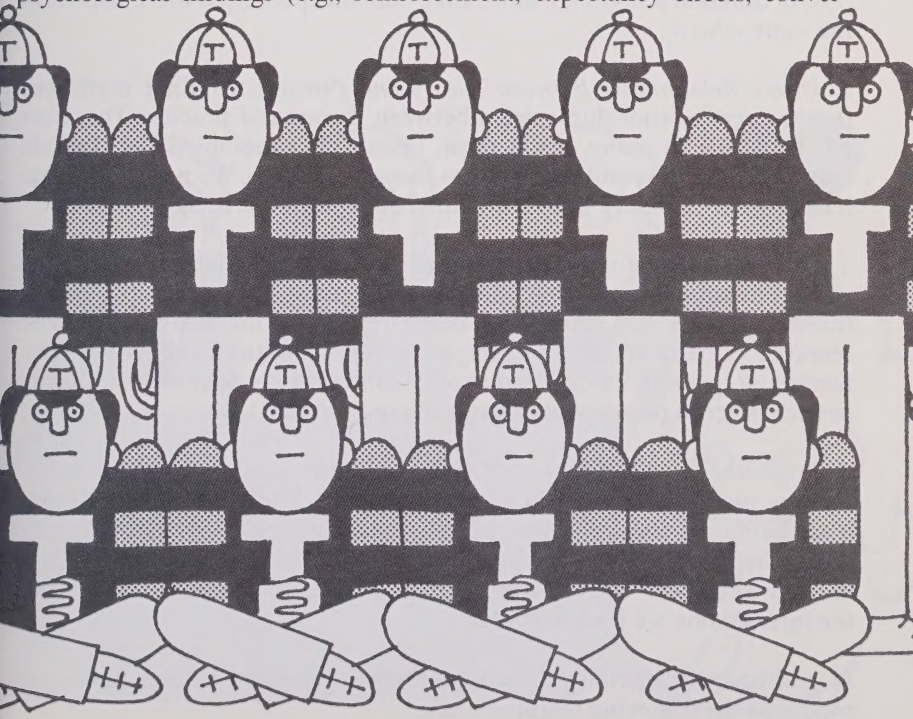
Impact of Research on Practice

It is frequently stated that research has failed to make any deep impact on practice or technique. This is true in the sense that it has had little demonstrable effect on therapeutic activities of the average practitioner. Some reasons for this are: 1) the short period of time over which systematic research has been undertaken; 2) the practical difficulties in designing and conducting control studies in the applied setting; 3) the lack of agreement on aims, objectives, and appropriate outcome measures; and 4) the tendency of therapeutic endeavors to achieve a certain functional autonomy so that empirical justification becomes unnecessary—or worse —irrelevant.

No doubt all of these restricted research in the past. However, we would be ill-advised to concentrate only on these. We must also consider the *sheer complexity* of the problem, the number of variables operative in the treatment setting. We must stop and entertain the possibility that there

may be major deficiencies in our research approach, that our conceptualization is inadequate, and that our former research strategies may lack potency.

Although research may *not* have had great impact on what therapists *do*, it served one vitally important role. It helped dispell the confining mystique surrounding traditional psychotherapeutic conceptions. It produced important attitudinal changes. It broke the illusion that we know more than we do. It eroded the notion that psychotherapy is somehow a unique (almost mystical) process, totally different from all other interpersonal interaction. It promoted acceptance of psychotherapy as a special case in the general area of interpersonal behavior, and that the principles governing it are essentially the same as those operating in any other area of social interaction. Because of this, psychotherapy was brought into the mainstream of scientific investigation, opening the field to new approaches and techniques. It permitted application of a large number of social-psychological findings (e.g., reinforcement, expectancy effects, conver-



gence, interpersonal attraction, role enactment, social reinforcement, modeling or imitative learning, vicarious therapy pre-training, and commitment and improvisation) most of which were originally studied outside the therapy setting.

Some Past Learnings

There are many specific learnings which have emerged from treatment studies. I will list and briefly discuss a number of these, starting with some common myths which affected the validity of many past research results.

1. Therapist Uniformity. One common assumption was that therapists were more alike than different—particularly within schools of therapy. For example, psychoanalytic therapists were largely considered interchangeable (as were Rogerians, Adlerians, etc.) at least for research purposes. This is an unwarranted assumption. Studies have shown that experienced therapists of different schools are more alike than inexperienced therapists from the same school.

2. Direct Relationship Between Theory and Practice. Another myth was that a direct relationship existed between theory and practice. This does not hold true in many, if not most, cases. What therapists say they do may bear little resemblance to what they actually do. We now know that it is necessary to study what a therapist does, not what he says he does.

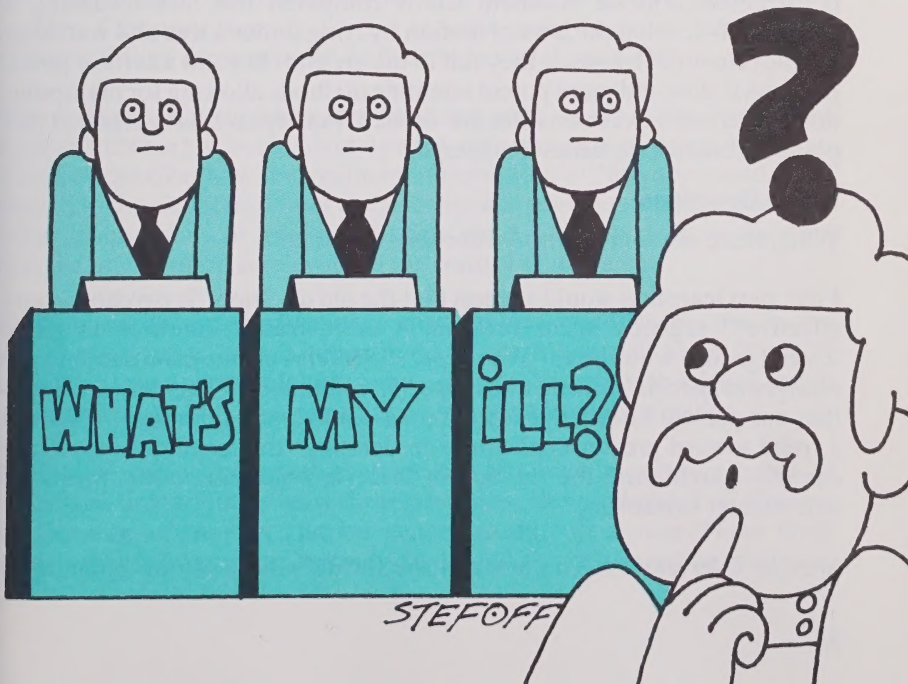
3. Patient Uniformity. It was assumed that patients, particularly at the start of treatment, were more alike than different. Though seldom stated, this assumption was implicit in much research. This attitude retarded research in many areas—for example, research into the treatment of schizophrenia (patients categorized as schizophrenic may bear little similarity to each other in personal characteristics or problems).

4. Psychotherapy—the Unitary Process. Another myth was that psychotherapy (within schools) was a unitary process. Clearly it is not. Rather it is a heterogeneous collection of techniques and therapist-offered conditions. Therefore, we are not justified in asking the question "Is psychotherapy effective?" We must now specify in detail the characteristics of the intervention we wish to evaluate.

In addition to dispelling the above myths, treatment studies have also produced the following learnings.

5. Non-specific Therapy Effects. Non-specific effects (expectancy-placebo effects) operating within the treatment setting can be very powerful. Almost any set of procedures operating within a benign relationship with the expectancy of positive outcome may result in behavior change. These effects need to be systematically investigated in their own right. Their nature must be defined so that their contribution, in conjunction with particular intervention techniques, can be optimized.

6. Patients May Become Better or Worse as a Result of Treatment. Another important learning—received, quite understandably, with great resistance—is that some patients improve with treatment while others become worse. A number of studies now show that the outcome variance for patients who have undergone treatment is greater than for control patients. Although some patients do tend to make greater gains than controls, others deteriorate more than they would have without treatment. This puts new perspective into the old ethical argument about withholding treatment in control groups. Indeed, perhaps it is unethical in many cases to offer



"treatment"—if we only knew which cases. Clearly, however, it is unethical to proceed blindly on the basis of clinical intuition alone. Research is an ethical necessity.

Former Directions

Research in the past relied almost exclusively on *naturalistic observation* of therapy as practiced. That is, it took the uncontrolled events of therapy as its independent variable. It proceeded to study the therapy process as it occurred in all its complexity. It related patient variables to outcome. It compared selected vs rejected patients, remainers vs dropouts, successes vs failures, therapists of one school vs those of another, successful vs unsuccessful therapists, etc. It served a confirmatory function by documenting or refuting clinical assertions. It is not to be denied that this approach came up with some useful learning. No doubt naturalistic observation studies will continue to make a contribution, but I think the payoff from these will be relatively small now compared with that from other approaches.

There are hundreds of variables interacting in the treatment setting, so that teasing out the influence of single variables, or groups of variables, is extremely difficult. Kenneth Colby compared this task to asking a physicist to develop the laws of motion by lying under a tree and watching the movement of leaves as they fall to the ground. Beyond a certain point, progress is slow and more potent scientific methods allowing for manipulation and control over variables are needed. Perhaps we have reached this point in research on behavior change.

Future Directions

What, then, are some fruitful directions to pursue?

First, past learnings would suggest that the old question "Is psychotherapy effective?" urgently needs revision. A more fruitful question to guide investigation would be: "What *specific interventions* produce *specific changes* in *specific patients* under *specific conditions?*" This acknowledges that our present knowledge is too broad-gauged and imprecise: it signals a trend toward greater explicitness in defining—the techniques used, the changes sought, and the relation of these to presenting client problems and context variables.

Specific Interventions. The mark of the future will be on the building of

techniques, the refinement of techniques, and the development of new techniques. This focus partly reflects a growing disenchantment with our present global theories of personality change, particularly as a basis for guiding therapy intervention. There is a need for tying theory more closely to empirical data on specific mechanisms of change. This will involve *isolation* and *manipulation* of variables. We will have to isolate variables operating in the treatment setting and manipulate (or dimensionalize) these variables in order to evaluate their effect. In this task knowledge from the mainstream of social-psychological findings can be exploited for its applied relevance.

Specific Changes. This is the outcome issue, or the question of what are the appropriate measures of change. We need to use specific, rather than global, improvement indices to tailor change criteria more closely to the individual's presenting problem and to the specific objectives of the interventions employed.

I am reminded here of Albert Bandura's example of the proverbial Martian who, upon reviewing our therapy-outcome literature, concluded that earth men embark on expensive and time-consuming programs of treatment in order to effect modifications in their Rorschach, TAT, and MMPI profiles. Certainly there is a need at some point to relate intrapsychic changes, if they are measured, to their behavioral correlates.

This example, at first glance, may seem less germaine to alcohol treatment since abstinence has been so widely used as an outcome criterion. However, it is often not clear how the treatment intervention or "therapy experience" offered to the alcoholic relates to an abstinence goal. It may, in fact, involve fewer assumptions to look for changes on Rorschach than to presume that the intervention is relevant to the control of drinking.

In other words, expected changes must become more closely tied to the intervention procedures. The emphasis of the future will be on kinds of change in relation to different interventions. This may involve a much less grandiose goal than attempting to change a total personality.

I think we should also note that the whole outcome question needs to be broken down into at least three processes: the production of change; the duration of change; and the generalizability of change. These three aspects should be kept conceptually separated. Any intervention may have

differential effects on each of these three aspects. For example, an intervention may be effective in producing change but not in maintaining this change within the treatment setting. Alternatively another interaction may be relatively successful in both producing and maintaining change in the treatment setting but may be unsuccessful in showing generalization of the change to real life situations.

Specific Patients. Past learning shows the need for identifying relatively homogeneous subgroups of patients on which intervention effects can be evaluated. Former nosological schemes are not very useful for this purpose. A new methodology of diagnosis is needed. Although still in its infancy, a behavioral assessment procedure is showing promise for tailoring assessment of client problems to specific intervention techniques and outcome criteria. The future will probably see the development of much needed instrumentation in this area.

Specific Conditions. Specific conditions are the total context in which the intervention takes place. Techniques do not operate in a vacuum, but their

effect may depend on the context in which they are operating. Variables such as the timing of particular interventions within the treatment situation and the complex of factors typically referred to as the therapist-patient relationship are involved. There is a need to define these as explicitly as possible, and to investigate their operation in conjunction with specific patient or problem areas and in conjunction with specific intervention techniques.

Summary

The mystique surrounding therapy that retarded progress in the past is largely eroded now. There is marked impatience with armchair theorizing, grandiose claims, and clinical impression unsupported by empirical data. There is growing insistence on the development of techniques that are more effective and economical than traditional approaches.

Rather than asking "Is psychotherapy effective?" research will address the question "What specific interventions produce specific changes in specific patients under specific conditions?" Research strategies with sufficient potency to accomplish this task must be employed. This will be accompanied by frank acceptance of the value-laden nature of treatment intervention. As long as psychotherapy remained veiled in mystique, as long as intervention objectives remained clouded, the question of values was successfully avoided. This is no longer possible. Behavior change is of necessity replete with value assumptions and it can not be otherwise. As David Bakan put it, this is a "politically sensitive" area. It will become increasingly so as more effective interventions for producing particular changes are developed. Frank acknowledgment of these value implications is probably the best defence against misuse.

In conclusion, then, the most significant advances will come from what we might think of as experimental therapy where research and practice coalesce. This will represent a major departure from naturalistic observation studies in which research has been appended in a most tangential fashion to clinical practice. Much is said about the need to build a two-way bridge between the laboratory and clinical practice, where both influence each other in a mutual feed-back circuit. This is certainly needed. However, to be truly effective there must also be a concentrated area of study where the two—practice and research—actually coalesce in the design of the treatment or intervention offered.

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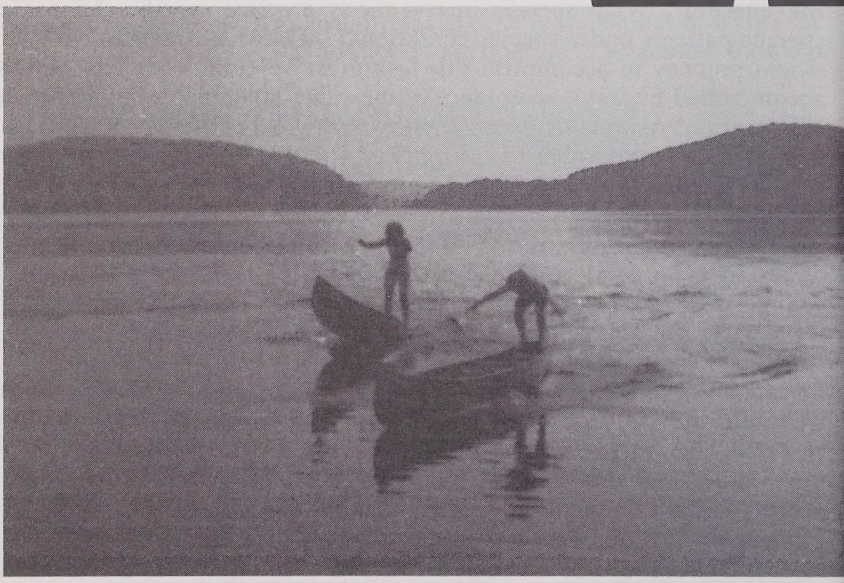

PHOTOGRAPHS PROVIDED BY PROJECT WHITEWATER

ITEWATER

by JUDY FRASER

As finite space diminishes, the more vital it seems to become to the welfare of urban dwellers. During past decades, the city's appetite for finite space has been ravenous and often indiscriminate. People today are finding it increasingly difficult to cope with the momentum of urbanization without

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the restorative effect of either finite or conceptual space. Especially those in depressed inner city neighborhoods and crowded public housing projects. Especially the young. Many turn to criminality, drug abuse, alcohol, and other forms of self-destructive behavior.

They seek escape from homes where family life itself takes a savage beating. They seek to expand the limits of their dreams, sometimes just to create the illusion of space where none exists. They strive to overcome the city's tyranny, its suffocating demands, its rigid discipline, the constraints it places on almost every theatre of expression. You simply can't yell loud enough, run far enough, or try hard enough without crashing through someone else's space.

> *Joey's chest heaved up and out with one long, determined draw on the incredibly clean northern air. He thought his lungs were going to explode. Instead, his eyes squeezed shut, his muscles tightened, and he let it rip. He screamed as loud as he could, until*

he was sure he'd deafen himself. When he finished, Joey could still hear his own echoing cry. He laughed wildly. He was exhilarated. A few seconds later another piercing scream set out over the lonely lake from the depths of the young girl beside him.

The present concept of space is crucial. It's a particularly important consideration at Project Whitewater, a rugged wilderness program for urban adolescents with behavioral or drug problems. Named for the churning waters of the Magnetawan River near Parry Sound, Ontario, Whitewater represents the belief that the reaffirmation of finite space can play a significant part in the rehabilitation of young delinquents.

It is the base camp for a summer program involving 80 inner city children from 12 to 19 years. Whitewater is the successor to Project Deer Lake, a similar though smaller venture that operated in Haliburton and Algonquin Park in 1972. Both projects received federal Opportunities for Youth grants and financing from other public and private sources.

Under the direction of Philip Fischer, a 21-year-old University of Toronto student, Whitewater was developed to promote more positive attitudes and behaviors among teenagers with existing patterns of self-destruction. The program combines one week at the base camp with one week of canoe-tripping through the Magnetawan water system for each group of four campers accompanied by two experienced youth counsellors.

The therapeutic value of the wilderness experience in treating problem youth is well established. Many professionals who deal with young offenders believe enthusiastically that its effectiveness is unmatched by therapy in any other situation.

> *The judge was firm. He offered the boy a clear alternative: "Either you go to reform school or you go to camp." Despite his youth—he was 13 years old—the boy possessed wisdom. He went to camp. The Family Court judge was a former counsellor; he believed camping built character.*

For the inner city child, the wilderness is an entirely uncharted environment. Few have ever been outside the city in their lives. In their strangeness they are all virtually equal.

The skills each needs to function in the bush are new to all so the responsibility of accomplishment is clearly a personal matter. It's an opportunity to discover a sense of value through perhaps the first flush of genuine achievement.

> *The first night we were there, three boys sneaked out of the tent about three o'clock and walked barefoot more than 12 miles straight through the bush to the nearest town. There was no road, no path, and no moon to light the way for them, yet they made it back by breakfast. They went for matches. They had had a couple of cigarettes and no matches.*

The limitations the wilderness imposes are few and physical, not social. The self-defeating, manipulative mechanisms many children have developed in the city are useless; they have to find new ways to relate to one another or forfeit the chance.

> *The group had come to rest on a rocky point overlooking a narrow, shallow stream. Everyone was tired, hot and dirty, winding down in the late afternoon sun.*
>
> *Except Janice. Uncommonly provocative, her eyes dancing, one hip thrust defiantly out, Janice was turned ON. She wanted to trade off her pack to one of the male counsellors for the remaining mile of the portage.*
>
> *She was predictably coy at first, but thwarted by his refusal to yield, she became wilier and more devious. Eventually she made him a very sexy offer outright. At 13, Janice was a walking trap, a masterful manipulator who had used the same currency to buy drugs regularly since she was 10.*
>
> *This time she drew a disinterested sigh. No takers. The group wasn't going to "carry" anyone; she would have to do her part just to keep up. After all, everybody had a pack to carry, and many had new horizons to touch.*

Most referrals to Project Whitewater come from established social service and community agencies such as the Addiction Research Foundation of Ontario, the Clarke Institute of Psychiatry, the Juvenile Probation Branch of the Ministry of Correctional Services, and the psychiatric service of the Family Court.

However, Fischer and his young counsellors used a slightly less orthodox but highly effective recruiting format for Project Deer Lake last year. They went out into the streets themselves to search for campers.

They found one group of juvenile solvent-sniffers sitting on the curb outside a downtown community counselling centre that had just banished them—for sniffing glue. They approached kids with heads buried in bags in dark corners of Toronto's mammoth Regent Park public housing development.

Whenever they could, they took children who hung out together in the city, often transporting a whole gang intact. By taking youngsters who already knew one another, they built a follow-up mechanism into an experience that might otherwise have occurred in a vacuum. Upon each group's return to the city, its members, individually and collectively, would act as a reinforcement on the changes the wilderness experience had wrought.

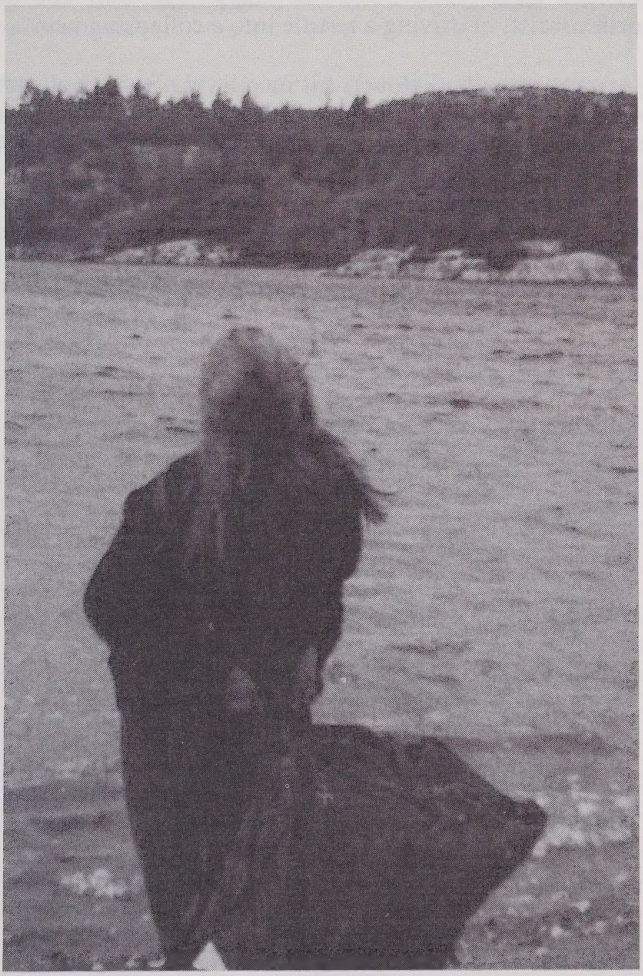
In the streets, Tom was king: 17, tough, strong, quick, adventurous, unafraid. He commanded loyalty and fear among his peers; he had turned most of them onto glue. Even the local police acknowledged his status as the neighborhood gang leader.

The city had given Tom a way to cope with the demands of its own perimeters.

But beyond the concrete boundaries Tom couldn't hack it. He couldn't even cut it with his own tribe of urban underlings.

He got discouraged on hikes, found the pack too heavy on portages, feared the water, and couldn't persuade a soul to sniff a tube of contraband solvent with him. It was a whole new world and a whole new way to measure up. Tom just didn't have the goods.

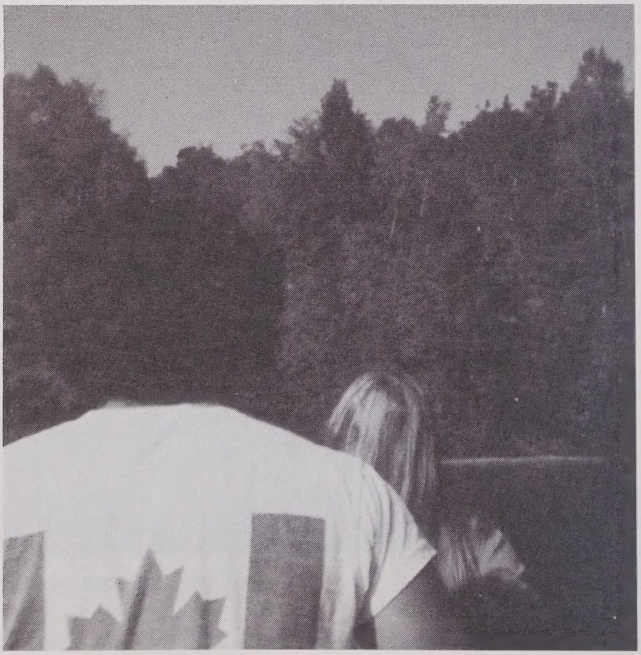
He stuck it out, though, and when he and his buddies returned to the pavement, there was a shake-up in the pecking order.



The program begins with a week at base camp during which each child learns the necessary wilderness skills and tasks: fire-building, cooking, campcraft, wilderness safety procedures, swimming, and canoeing. The mastery of each labor is sweet and energizing for a child whose measure of self-worth consists of driving a needle into a collapsing vein.

Every camper eventually discovers his own level of accomplishment, but only through constantly testing himself. He boldly confronts new challenges, extends his competence on others, and pushes the boundaries of his city-bred prison farther out.

> *Sammy stepped quietly, almost unnoticed, out of the dark shelter of the surrounding woods and into the light of the open fire. He entered the circle of squatting figures, and every eye arched upward*



toward him. He stood, legs astride, hands confidently on his hips, shaking his head incredulously.

"Man, I am stoned," he said through an irrepressible smile. "I am really stoned."

Sammy should know. A chronic glue-sniffer and a speed freak for four years, his veins tattered, his muscles starved, his will exhausted, a kid whose drug high was the only high he'd known in 19 years.

A week before, his diet of candy bars and soft drinks had given way to an appetite of unrestrained vigor. He had become newly aware of his own physical health and appearance, meeting every challenge the wilderness experience offered and graciously sharing his excess enthusiasm.

Sammy had gotten off that night on the northern lights, falling stars, and things that go "snap" in the dark.

For most young campers, Project Whitewater will provide the first truly meaningful success experience of their lives; for many it will be the beginning of trust, in their own abilities and in the support of others; for some it may mark a real step toward personal responsibility.

Or, in the case of the little boy who wouldn't eat wieners and beans with the rest of the kids, it may just be a missed meal. His mother was a banquet chef and he wasn't accustomed to camp fare, so he decided to go home.

STRESS
and the nation's health

The ramifications of our research on stress are closer to my heart than to my brain; they would not fit into the scientific monographs and technical articles which are my usual outlets for communication.

I should like to explain my views, this time not as an expert on the biochemistry of stress reactions, but merely as a citizen who is worried about what stress is doing to our society. I can claim no expertise in politics

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Dr. Selye is Director & Professor at the Institute of Experimental Medicine and Surgery, Université de Montreal, Montreal, Quebec. This article is from his address to the National Conference on Fitness and Health, 1972 and appeared in *Modern Medicine of Canada*, Vol. 28, No. 5 (pp. 395-400), May, 1973. Reprinted by permission.

by HANS SELYE

LUSTRATIONS BY
TOM McNEELY

and sociology, though this is the kind of talent that would be needed now. We must find men who can translate the lessons of the laboratory into a code of behavior. It seems to me that a way of life based on the understanding of man's response to the stress of constant change is the only road that leads out of the jungle of conflicting thoughts about right and wrong, justice and injustice that has confused our sense of values. We cannot stand by idly watching the gradual displacement in our youth of the sense of purpose by that of despair. We must help them to overcome the present wave of unnerving frustration that can express itself only in violence and brutality. We must convince them that they cannot succeed in quenching their normal thirst for approval by the compulsive hunt for more and more amorous victories or by trying to attract attention through quaint, clownish appearance. There is no way to escape the reality they cannot face, by merely blunting their vision of it with drugs.

How Could We Help Them?

It is only fair to re-emphasize at the outset that I have no specialized training to appraise or combat any of these ills of our time, but I did spend some 35 years of my life exploring the effects of stress upon the body, including its mental activities. And no matter what causes our stress—be it starvation, war, the collapse of the Stock Exchange, or even the mere fear of any of these dangers—what concerns us is its effect upon the bodies and minds of people. It may not be out of order, therefore, for a laboratory man to reflect on the relationship between the medical and sociologic consequences of stress. To do so, I should like to outline the main facts that we have learned about biologic stress and its implications in everyday life, especially as regards our attitude towards work and leisure.

Let us start with a few definitions:

What Is Biologic Stress?

I have defined stress as "the nonspecific response of the body to any demand made upon it." Today, stress is so defined in virtually every textbook of medicine or psychology, but at first it was quite difficult to convince people that the body can respond in the same manner to things as different as a painful burn or the news that you won the jackpot of a lottery. It

was not easy to accept that every type of normal action or the fight against any kind of disease could provoke an identical stereotyped response in our body. And yet, this is the case. Of course, we do reply to each stimulus in a specific manner also—to cold with shivering, to heat with sweating, to infection with immune reactions—but superimposed upon each of these responses that are adjusted to the particular needs created by a particular situation, there is always the "biologic stress-reaction." This is also known as the "general adaptation syndrome," since it represents a response that helps adaptation in general, that is, adaptation to anything.

All the stress reactions are essentially defensive but, if they are insufficient, excessive or otherwise faulty, they themselves may cause diseases. An example will explain in principle how diseases can be produced indirectly, by our own inappropriate adaptive reactions. If you meet a drunk who showers you with insults, nothing will happen if you go past and ignore him. But if you respond, you may start a fight and get hurt, not only by the drunk but also by your own emotional reactions which increase your blood pressure, accelerate your pulse, and change the entire biochemistry of your body in a dangerous manner. As we have seen, any kind of activity sets our stress mechanism in motion; hence, not only anger but any kind of activity can cause disease in predisposed individuals. It will largely depend upon accidental factors—such as genetic predisposition or previous disease in one or the other organ—whether the heart, kidney, gastrointestinal tract, or brain will suffer most. In the body, as in a chain, the weakest link breaks down under the stress of tension, although all parts are equally exposed to it.

Stress Is Not Always Noxious

Does all this mean that we should avoid stress whenever possible? Certainly not. Stress is the spice of life. Being associated with all types of activity we could avoid it only by never doing anything. Who would enjoy a life of "no runs, no hits, no errors?" Besides, certain types of activities have a curative effect and, actually, help to keep the stress mechanism in good shape.

All of you know that occupational therapy is one of the most efficient ways of dealing with certain mental diseases, and that exercise of your

muscles keeps you fit. It all depends on the type of work you do and the way you take it.

The continuous leisure of enforced retirement or of solitary confinement—even if the food and bed were the best in the world—is certainly not a desirable aim.

What Is Work and What Is Leisure?

Work is what we have to do; play is what we like to do. Even reading the best prose or poetry is work for the professional literary critic as tennis or golf is work for the paid pro. Yet, the athlete may read for relaxation, and the man of letters may engage in sports in order to relax. Fishing, gardening, or almost any other occupation is work when you have to do it for a living, but it is play if you do it for fun. The rich executive would not think of moving his heavy furniture, but he will go regularly for a "work out" to the gym of his expensive club.

Work is a basic biologic need of man. The question is not whether we should or should not work, but what kind of work suits us best. In order to function normally, man needs work as he needs air, food, sleep, social contacts, or sex. Few people would enthusiastically welcome the discovery of test-tube babies making sex superfluous; let us not look forward with eager anticipation to the days when automation will make everything redundant.

The Western world is being wrecked right now by the unsatiable demand for less work and more pay. Less work to get more time for what? More pay to do what? Few people give much thought to what they will do with their free time and extra money after they have reached a comfortable minimum income. Of course, there is such a thing as a minimum living standard; but in practice, the urgency of the clamor for improvement does not depend so much upon the number of working hours or the salaries earned, as upon the degree of dissatisfaction with life. We could do much—and at little cost—by fighting this dissatisfaction.

Homo Faber

Why should we work so hard to avoid work? The French philosopher, Henri Bergson, justly pointed out that it would be more appropriate to call our species "Homo faber" (the making man) than "Homo sapiens"

(the knowing man), for the characteristic feature of man is not his wisdom but his constant urge to work on improving his environment and himself.

The most important aim of man is not to work as little as possible while earning enough to acquire the security that he will never have to work much harder. For the full enjoyment of leisure, you have to be tired first, as for the full enjoyment of food the best cook is hunger.

Do not listen to the cherished slogans of the agitators who keep repeating that: "There is more to life than just work" or that "You should work to live not live to work." This sounds pretty convincing, but is it really? Our aim should not be to avoid work but to find the kind of occupation which, for us, is play. The best way to avoid stress is to select an environment (wife, boss, social group) which is in line with our innate preferences, and to find an activity which we like and respect. Only thus can we eliminate the need for constant adaptation that is the major cause of stress.

The True Destitutes

Only the physically or mentally handicapped really prefer not to work. Short hours are a boon only for the underprivileged who are not good at anything and do not like to do anything in particular. Admittedly, it is difficult to get much satisfaction out of being a garbage collector, night watchman or executioner, and those who can do nothing else are justified in living by the slogan "less work and more pay." But fortunately, most occupations do not fall into this category. Many more people suffer because they really have no particular taste for anything, no hunger for achievement. These—not those who earn little— are the true paupers of mankind. What they need more than money is guidance.

Those who could allow themselves the luxury of permanent idleness are rarely idle; they do not want to retire just because "they can afford it." They have enough money but they do not consider their work as an obligation, a duty, but as a privilege, a fascinating play which gives them enormous satisfaction.

Stress and Aging

Speaking about the leisure hours of retirement, let me remind you that there exists a close relationship between stress and aging. Stress, as I have said, is the non-specific response to any kind of activity at any one time;

aging is the sum of all the stresses to which the body has been exposed during a lifetime.

A newborn baby, while crying and struggling, is under considerable stress but shows no sign of aging, whereas a man of 90, quietly sleeping in his bed, is under no stress but shows all the signs of aging.

Each period of stress, especially if it results from frustrating, unsuccessful struggles, leaves some irreversible chemical scars (think of them as insoluble precipitates of living matter), which accumulate to constitute the signs of tissue aging. But successful activity, no matter how intense, leaves virtually no such scars. On the contrary, it provides you with the exhilarating feeling of youthful strength, even at a very advanced age. Work wears you out mainly through the frustration of failure. The most eminent among the hard workers in almost any field can become very old. Think of Leonardo da Vinci, Pablo Casals, Winston Churchill, Albert Schweitzer, Henry Ford, Charles de Gaulle, Bertrand Russell, Konrad Adenauer, Picasso, Matisse, Toscanini and—in my own profession of medical research—the Nobel Prize winners, Szent-Györgyi, Otto Loewi, Waksman, Rous, Warburg. All these men continued to be successful—and, what is more important, happy—well into their seventies, eighties, or even nineties. Of course, none of these people ever "worked" in the sense of the dictionary definition ("work is what you don't like, but have to do"); despite their many years of intense activity, they lived a life of leisure by doing what they liked to do.

It is true that few people belong to this category of the intellectual elite; admittedly, their success in meeting the challenge of stress cannot serve as a basis for a national code of behavior. But you can live long and happily by working hard along more modest lines, as long as you really love your activity and are reasonably successful at it.

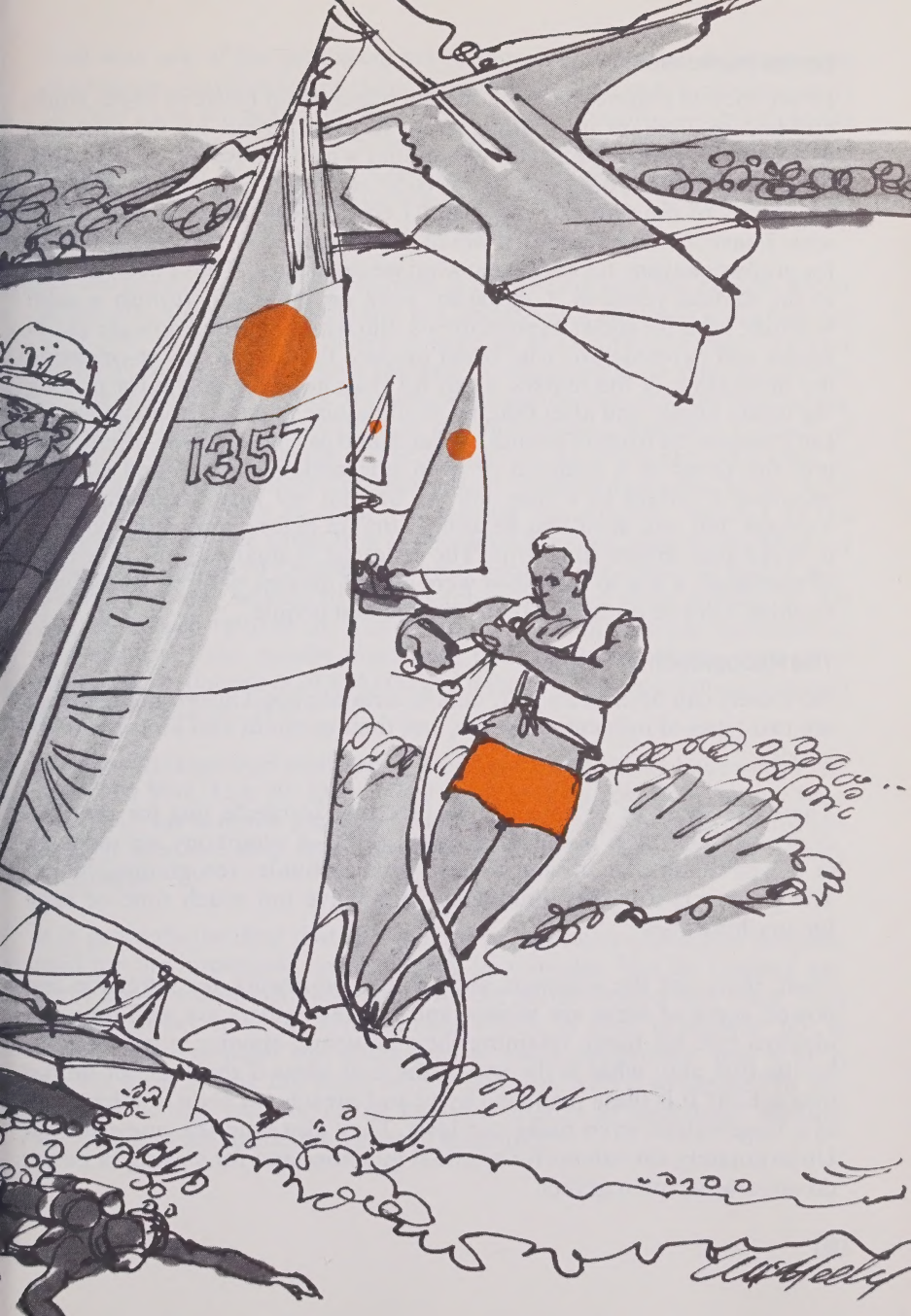
When I got into medical school—somewhat prematurely at the age of 18—I was so fascinated by the possibilities of research on life and disease that I used to get up at 4 o'clock in the morning to study in our garden until about 6 in the evening (with very few interruptions). My mother knew nothing about biologic stress, but I still remember her telling me that this sort of thing cannot be kept up for more than a couple of months and would undoubtedly precipitate a nervous breakdown. Now I am 66. I still get up at 4 o'clock in the morning and still work until 6 at night

(with few interruptions); yet I am perfectly happy leading this kind of life. No regrets. To combat the physical decay of senility, my only concession had to be now to set aside an hour a day to keep my muscles trim by racing around the McGill Campus on a bicycle between 4 and 5 in the morning.

Stress and the Average Man

I believe that this way of life is applicable to almost any productive occupation. A carpenter can have the satisfaction of success and fulfillment by looking at a well-made table; a tailor, a shoemaker, can get fun and the feeling of fulfillment from making a suit or a pair of shoes that his customers admire. Even a hunting dog is proud to bring in his quarry unscathed; just look at his face and you will see that his work has made him happy. Only the stress of frustration, of lack of purpose, can spoil the satisfaction of performance. The art is to find the job that you like best and that people honor. Man must have recognition, he cannot tolerate constant censure, for that is what makes work frustrating and stressful. With the progress of science and automation, most of the tedious, unpleasant activities will no longer be necessary, and more people will have to worry about what to do with their leisure time. Soon we will be able to cut down on obligatory working hours to a point where work deprivation will become our major problem. If man has no more incentive to work out his role as "Homo faber," he is likely to find destructive, revolutionary outlets to relieve his basic need for self-asserting activity. We may be able to solve our age-old problem of having to live by the sweat of our brow, but the fatal enemy of all utopias is boredom. What we shall have to do after science makes most "useful work" redundant is to invent new occupations.

On the endless voyages of the old sailing ships, when there was often nothing to do for weeks, the sailors had to be kept busy washing the deck or painting the boat just to avoid mutiny for the relief of boredom. Let us start preparing right now not only to fight pollution or the population explosion, but also to combat boredom. The lack of work threatens to become extremely dangerous. Let us begin a full-scale effort to teach "play-professions"—the arts, philosophy, craftsmenships, science—to the masses at large; there is no limit to how much man can work on the perfection of his own self. (I have spent years formulating specific proposals for the way this should be done, but today it's too late to spell out my utopia.)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Social Implications

I have tried to outline the way I see the relationship between stress, work, and leisure. Perhaps this outline could serve as a basis for the planning of a better, healthier philosophy than that which guides our society now. I think we should adapt our moral code and value judgments, to fit the exigencies of the times to come. But I do not feel competent to preach what I have learned. Besides, it would be contrary to my basic predilection for professionalism, for sticking to what we can do well. I have been trained to do medical research. Laboratory work on stress can furnish a solid scientific basis for social improvements. But what is needed now are sociologists and psychologists who could prepare the territory by re-orienting the motivation of the masses. Then we shall need the media for driving the lesson home; and after that, we shall require practical politicians who can translate the fruits of medical research and psychological re-orientation into the terms of a national or even international policy and code of behavior. It would be a long job far beyond my ken. Meanwhile it is a dream, but you must first be able to dream before you could even try to make your dream come true. The conquest of smallpox, the invention of television, a trip to the moon were all but dreams before they became realities. Let's be optimists; there are talented people.

The Recognition of Talent

No society can be entirely just; ours is certainly not. Unfortunately, there are two types of influential people, and their methods and aims are often at odds.

There are those of us who like to produce; to create just for the love of creation, but also because any good thing—a symphony, an industry, or a well-made pair of shoes—earns you gratitude, recognition, honor. The producers are busy producing; they have not much time or taste for anything else.

Then, there are the schemers and plotters who work for influence and power; some of these are vicious and ruthless, others are well-meaning idealists but, for them, retaining their influence, staying in power, must be the first aim; what is the use of the best ideas if they cannot be put into action? It is these men who write and preach our code of ethics and, to a large extent, even make our laws. They also hold the purse strings. Unfortunately, the talents for spiritual guidance and for staying in power do not always run together.

You may ask: if the producers are so ingenious, creative and dedicated to progress, couldn't they beat the unproductive plotters at their own game? In theory, yes, but not in practice. The producers usually have even greater intellectual gifts than the schemers, but they could not use them for this kind of activity because they have no respect for it; and if they overcame their aversion, their creativity would soon wither. I am afraid the two types of activities are not easily compatible.

As you have read in the newspapers in connection with the debates about Medicare, a general practitioner in Canada can easily make $50,000 per year and, to practice, it suffices to have an M.D. and a license. The vast majority of medical students succeed in obtaining these documents. On the other hand, the Quebec Ministry of Education offers $3,000, the Quebec Medical Research Council $5,600, and the Medical Research Council of Canada $4,800 per annum to the elite of young physicians who wish to practice the much more complex art of medical research. Even these incomes are difficult to come by. Among the carefully selected M.D.s of my Institute, five submitted applications for such posts to the Medical Research Council of Quebec last year, because they were so highly motivated that they wanted to do research even under these conditions. All five have been refused for lack of funds. Even an assistant professor at our Institute (who usually must have both M.D. and Ph.D. degrees) is offered an initial salary of $14,000 and a lecturer (chargé d'enseignement) $8,900 per annum. Why?

Competent crane operators earn $16,640 per year for a 40-hour week (The Montreal Star, Aug. 20, 1970). They deserve every cent of it, but my boys must pay for a much longer education before they become competent at their job, and then they have to put in much longer hours to stay competent.

It is perfectly justified that the general practitioners should be properly paid for the immensely useful service they render. Nor do I blame any of the above-mentioned Institutions for the pitiful support they offer. They are dependent upon the Government which, in turn, is likewise not to blame because, under our conditions of value judgments, that is all it can do. I am raising the point only to ask you: who is to blame? To me, it seems neither just nor in the national interest to discourage medical research by such restrictive financial measures.

I think the public should know about these things, because in the final analysis, it is footing the bill for all salaries and I cannot believe that, if people knew about it, they would approve these guidelines for the distribution of wealth.

But after all I have said about satisfactions other than financial, who are we to grumble? Scientists have other compensations, and if our young colleagues could only achieve that indispensable "minimum living standard," I don't think they would be dissatisfied with the path they have chosen. Most of them are reticent people who do not like to fight in pressure groups for their own interests, but perhaps it is up to us, the older ones, to speak up for our junior colleagues. We, who are at least somewhat better off and certainly have less of a future to worry about, can plead their case with more detachment. And I think we should plead it. I am firmly convinced that, if people would know more about the basic issues involved, these situations would be remedied by public outrage.

The Scientist's Rose Garden

Meanwhile, I try to console my young assistants by telling them that perhaps we don't need money as much as some other people because much of what they want to buy is given to us free. I remember having spent an evening at the luxurious home of a physician who has built up an extremely lucrative private practice in California. After dinner, we sat before the enormous scenic window of his living-room and looked out into the darkness. He explained that he is fond of flowers, and out there is a rose garden which he proceeded to illuminate in red, green, blue, and every other shade of the spectrum by pressing different buttons on a switchboard attached to his armchair. It was a rather expensive and complex installation often in need of repair, he said, but after a tiresome day at the office he liked to relax by comtemplating this display.

I am also fond of flowers and at first I thought with self-pity about how far I was from being able to afford anything like this. The single cactus I own looks very plain by comparison. But then I wouldn't really enjoy Nature by pressing the buttons on that panel; after a few minutes I am afraid I would get bored. My "rose garden" is the Institute of Experimental Medicine and Surgery. It permits me to contemplate much more wondrous and varied aspects of Nature. In addition, it occasionally turns up a useful fruit. Besides—come to think of it—I can even brag that my playground

is much more expensive than his and I don't have to pay for it from taxable income.

Neither the prestige of
your subject and
The power of your instruments
Nor the extent of your
learnedness and
The precision of your planning
Can substitute for
The original originality of your approach
and
The keenness of your observation

To Reach for the Moon

Before the moon shot, I had spent a few most inspiring days with Wernher von Braun on the Grand Bahama Island. Among other things we spoke about the relative distribution of national funds for space travel and for medical research respectively. When I complained about the comparatively meagre support for medical research, he looked at me with dreamy eyes which I shall never forget, and said: "You do not have the Moon to offer."

But, don't we? What could be of greater concern to man than the agony of excruciating pain and the humiliation of impending, certain death which wipes out all other motives? There may be something worth having on the Moon. Undoubtedly, the first nation to reach another planet has earned much admiration and prestige, and yet, there is no reason to doubt that, with an equal investment of money and (more important) talent, a systematic attack on cancer, heart disease, or premature aging would be less likely to succeed than our dreams of future interplanetary travel. Even the grandeur of conquering the Universe, or the fear that war may break out, or that our world may become overpopulated, seem to pale at the bedside of a patient who will die because we were remiss in our efforts to learn more about disease.

Even if we are badly paid, we do have our own "moons" to conquer. I think society could and should support medical research more generously than it does. It is hardly in the interest of national health that those entrusted with the direction of medical research must, under our system, spend such a large part of their time begging for the salaries of their colleagues and the expenses of their materials.

How to Enjoy the Stress of Life

Let us not finish these thoughts on a tone of complaint and dissatisfaction. As I have said before, scientists have their compensations. More than anything, man needs approval and self-esteem; more than anything, he fears censure and contempt with the resulting sense of frustration which is the worst kind of stress. Scientists enjoy, no less than other people, an approving pat on the back and, according to current opinion polls, they are, on the whole, the most highly honored class of the population.

Their work requires a great deal of dedication. Like other people in creative positions who strive for excellence, scientists have little time to spend with their families. Their wives—like those of most people dedicated to any cause—are tempted to complain about husbands who care "only" for their beloved lab, plant, or office. "Not only." Besides, those dedicated to creative accomplishment can always answer with Richard Lovelace, the Seventeenth Century English poet: "I could not love Thee Dear, so much, loved I not honour more." For even love, to be valuable, must be offered by someone who is someone.

I have told you about the dangers and the benefits of stress, about the importance of finding the proper proportions between work and leisure and, most important, about trying to make them one by selecting such work that, to you, is play. We must find the right balance between the excessive or abnormal use of our body which "overheats" its motor, and lack of use that makes it rust. To function well, you must first warm up, but not to the point of exhaustion. I do not preach a life of leisure; we should provide an outlet to our talents, but at all cost we must avoid frustration by not attempting that which is beyond us.

In my book, "The Stress of Life," I tried to sum it all up in a jingle, first in French, since it sounds better in the language in which it was composed:

"Lutte farouchement pour ce
que tu crois un noble but
mais abandonne tout effort
quand tu te sais battu"

In English, it reads:

"Fight for the highest
attainable aim,
But do not put up resistance
in vain."

The Addiction Research Foundation of Ontario, established in 1949, is an official government agency financed by annual Provincial grants. Its purpose is to learn more about the effects of alcohol and other drugs and to develop improved ways of preventing and managing alcoholism and drug dependence. Helpful information about these matters is available from A.R.F. offices located in:

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DDICTION RESEARCH FOUNDATION OF ONTARIO

Conflict of interest is a recurring issue which presents itself in many ways. In its most insidious form it occurs when decision-making power converges with opportunities for personal gain. One consequence is that a few individuals profit at the expense of community well-being. Exploitation of our natural resources—energy, timber, air, and water—are current examples of this. Response and responsibility usually involve "someone else"...not us.

However, in a recent address this Foundation's Executive Director, H. David Archibald, described a conflict of interest that involves us all. His statement, published in full in this issue of *Addictions*, describes our society as one well on the way to saturation in alcohol. In the past two decades the *per capita* consumption of beverage alcohol has risen 42%. Rising too are the costs of health and social services directed to repairing the damage attributed to abuse of this drug. Uncounted is the toll exacted of family life, industrial productivity, safety on our highways and waterways.

Dazzled by the liquor industry's highpowered promotion, people are deluded about the real costs and consequences of ever-increasing consumption. Producers, purveyors, and purchasers alike seem enraptured by the myth of "continental drinking." There appears to be little understanding of the ultimate price we will all have to pay for this drift to "liberalization" in law and lifestyle.

Dr. Archibald's statement is a vigorous call to awareness and action. No one can read his statement—politician, professional, or private citizen—and avoid serious contemplation of at least two immediate steps towards resolving the conflict between short-term benefits and long-term costs. One is an immediate moratorium on any legislation tending to increase the consumption of alcohol. The second is a major public education program on the implications of current trends.

Only then can a responsible government presume to legislate in the public interest. To do otherwise—whether through apathy or ignorance—is to let the booze "flow now...and pay later."

L.A.P.

editorial

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Changing Drinking Patterns in Ontario — Some Implications

by H. David Archibald

Very often, when faced with the prospect of meeting a group as varied as this, the major difficulty lies in identifying the most relevant issue for discussion. This field of chemical dependence is vast and complex. It covers a span of time dating back to the earliest of recorded history. It has

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Dr. Archibald is Executive Director of the Addiction Research Foundation. This article is adapted from the Keynote Address to the Foundation's Advanced Summer Course, Toronto, August 12, 1973.

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affected—positively and negatively—every culture, every society, every nation. The variety of drugs that have been and are being used over the span of time and geography number in the thousands. In such a vast field, selection of the issue or issues to highlight becomes a function of time available and priority in relation to that time.

I am therefore going to arbitrarily select one issue, and one drug, to concentrate on this evening—namely the impact of alcohol on our own society here in Ontario and in Canada.

In the next few moments I intend to outline to you a situation which, if left unattended to grow and envelop ever larger segments of our society, will undoubtedly render immense damage to our social fabric.

In our response to drug abuse we have been through a series of battles. We have come out of each of these a little battered and I hope a lot wiser. But I am afraid we have also come out somewhat desensitized, complacent, and, I believe, highly vulnerable. Let me give you an example. Three years ago when we reported that almost 20% of our high school students had tried marihuana parents and school officials reached the edge of panic. A few months ago when we reported that almost 80% of high school students drank alcohol, and many of these were drinking frequently, there was one collective yawn. Even worse, there was a feeling of relief that at last youngsters in our schools had come to their senses and had come back to something we could all accept.

No talk about alcohol being a drug, just relief that our kids had opted for a known chemical, one we can appreciate, one about which we think we can be complacent.

If there was ever misguided complacency, this is it.

Alcohol as a drug is impinging more and more upon our lives. It is affecting more and more users and growing numbers of families and colleagues of users.

It wasn't very long ago that most of our dialogue concerning alcohol was characterized by two opposite poles: on the one hand we had the temperance forces intent upon wiping the "moral blight" of alcohol from the face of our society. On the other we had the strong and aggressive alcohol

beverage industry demanding the right to market their products with as little interference as possible.

There was much ideology, a wealth of emotion, and very little fact. It was predictable that such repeated confrontations would have but one outcome—the virtual demise of the temperance forces. It was predictable because growing segments of society wanted the right to drink alcohol, resented anyone wanting to interfere with that right, *and in fact, most people today cannot be said to abuse that right to drink.*

But in the course of this evolution and in the disappearance of the temperance groups, a forum, a podium has been lost from which any argument can be made against those who would continue rolling back the restrictions against drinking alcohol—those who would promote encouraging its use in any form, in any amount, under any condition.

The "dries" have been obliterated and the "wets" can have a field day. There are powerful economic forces who can realize tremendous advantage in selling as much alcohol as possible to anyone who can pay the price—who can find tremendous advantages in saturating our society. Someone must offer a response.

By this I don't mean to suggest that we all pick up our axes and try to beat sense into the promoters of saturation policies. But someone must accept the responsibility for giving the public alternate points of view, and giving individuals the information they need in making responsible decisions about the role of alcohol in their lives. This does not imply a responsibility to trumpet prohibition, to shout moral epithets, or to attempt to restrict the right of an individual to enjoy a drink. But, it does imply the need to inform that individual of the risks involved in drinking too much, on too many occasions, and in fact, to view this drug—alcohol—with caution.

We Canadians at the present time drink 30% more alcohol than we did 25 years ago. We drink it on more occasions throughout the day; we drink it in more locations; in more situations; in greater varieties. (The martini lunch is very common). We drink alcohol at younger ages and we develop more social pressures to force others to do the same.

In Ontario, close to 300,000 persons drink enough alcohol (approximately

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9 oz. of whisky or its equivalent in beer or wine daily) to increase their risk of contacting organic disease such as liver cirrhosis. Of this 300,000, more than 145,000 have reached the stage of alcoholic illness. Of the entire adult population of Ontario (that includes everyone over the age of 15), 86% of all males and 75% of all females drink some alcohol.

Someone must define what is at stake in terms of economics, health, and social disruption if our society continues its headlong rush to emulate the so-called "civilized, continental" drinking styles of some other nations.

Continental Trends

Very often we hear this "continental" style of drinking promoted by people who have just returned from a three or four week holiday to Europe—especially France or Italy. They report that the French or the Italians always seem to be sipping wine or some other beverage, that they do so at practically all meals, that alcohol is integrated into the normal daily functions, and that hardly anyone ever appears to be drunk—at least in public. In short, it seems civilized, sophisticated, harmless.

Consequently we hear repeated pleas to free up our drinking restrictions, to allow more drinking at sidewalk cafes and sporting events, to allow alcohol at picnics in the park, and to promote alcohol as a means of intra-family communication by serving wine with meals even to younger members of the family. Now this sounds sensible, and it appears to be a reasonable compromise if one can accept the basic premise that these drinking styles collectively really are as innocent as they seem.

The facts, however, are brutally different from the casual observations brought back by holidaying tourists.

Because of the broad integration of drinking practices into the over-all day, the average person in France drinks almost three times as much alcohol as does the average adult in Ontario. He drinks approximately 25 litres of absolute alcohol a year compared to almost 9 litres of absolute alcohol by the average adult in Ontario.

France is a country where drinking is considered a normal social function integrated into the daily fabric of living—where wine is an almost essential element with all meals, to all family functions, to all gatherings for almost any kind of social interaction.

It is a style that ultimately ends in alcohol saturation because, after all, there is only so much that people can drink just as surely as there is only so much they can eat or so many cars they can drive.

Yet it is the style of drinking many people here want to emulate.

In case anyone is sceptical about this prospect of saturation, consider that in the past two decades consumption of alcohol in France has increased only 1%. It still is the highest in the world, but it increased only 1%.

Considering that alcohol in the form of wine is cheaper (as a measure of disposable income) in France than almost anywhere else, and considering that legal restrictions are few and far between, we must at least entertain the thought that a saturation point has been reached.

But what of other nations who have not yet reached that point but who have embarked on policies of greater and greater liberalization?

In Ontario the average consumption in 1967 was 24% higher than in 1950; in Canada over-all it was 30% higher. In the same time period alcohol consumption in The Netherlands shot up by 111%, in Austria by 127%, and in West Germany by 196%.

This is the order of magnitude we must think about. *Is this the kind of drinking style and result we wish to achieve?*

It is true that cases of *obvious* drunkenness are rare in France, but, the liver cirrhosis death rate in that country is the highest in the world, six times higher than it is in Canada. Furthermore, 42% of the total health expenditures in France are attributable to the treatment of alcohol-related disease, and about 50% of all its hospital beds are occupied by patients suffering from such disease. That is the other side of the coin.

Is that what we intend to emulate?

In Ontario the effects in terms of social, health, and economic costs of our present level of alcohol use are serious—far more serious than is generally thought.

We don't have to use alarmist tactics to dramatize the growing impact

that alcohol use is having on our society today. We have only to look at some of the facts in order to decide whether or not this is the course we want to maintain and in fact, extend even further.

Before I present to you some of these data, I would refer you to two monumental studies that have succeeded in placing the problem of alcohol abuse into perspective. Neither the Le Dain Commission on Non-Medical Use of Drugs nor the United States National Commission on Marihuana and Drug Abuse were established primarily to deal with the problem of alcohol misuse. But in the course of their painstaking research into the whole field of drug abuse, both commissions, working independently, came to virtually the same conclusions, the pre-eminent one being that alcohol misuse is by far the greatest drug problem in North America, and that the way alcohol is used has very direct effects upon the way all other drugs are used by the so-called sub-cultures.

And even more recently, in fact just this past summer, the Canadian Medical Association in its General Assembly urged all its member physicians to play a much more aggressive role in responding to the nation's number one drug problem, alcoholism.

Alcohol and Public Health

In Ontario in 1969, 22,600 persons between the ages of 20 to 70 died. In examining the records of these deaths we found involvement of alcohol to be even greater than we had anticipated. The data, based on an analysis of coroners' reports, showed a range of alcohol-associated illness that goes far beyond the illness indicator usually associated with alcohol—cirrhosis of the liver.

Of these deaths in 1969 not only were 38% of cirrhosis deaths due to alcohol, but we found that alcohol was also implicated as a cause in 22% of peptic ulcer deaths, 18% of suicides, 15% of pneumonia deaths, 16% of deaths due to cancer of the upper digestive and respiratory tracts, and more than 5% of deaths due to heart and artery disease. In addition, alcohol was involved in 45% of deaths by poisoning, 43% of accidental fire deaths, and almost 25% of deaths due to falls and other physical trauma.

Of the total number of deaths in Ontario in this base year 11% were alcoholics. In effect, we found that *the alcoholic had twice the chance of premature death than had the non-alcoholic person.*

Now, the cost of this illness and death, personal anguish and disturbance, cannot be quantified in terms of dollars and cents. But we can quantify some of the direct health and social costs of alcoholism in Ontario by calculating the proportion of costs attributable to alcohol-related problems in the public general hospital system, the mental hospital system, under social legislation known as the Family Benefits Act, and through the Children's Aid Societies.

Our research has found that in terms of health and social costs, alcohol-related problems are responsible for more than 10% of expenditures in general public hospitals, more than 15% in mental hospitals, approximately 20% of the expenditures under the Family Benefits Act, and 30% of expenditures for Children's Aid Societies.

In terms of absolute costs based on 1971 figures, the Ontario taxpayer paid *$89 million* through the Ontario Hospital Insurance Plan for illness related to alcoholism; he paid almost $17 million through the mental hospital system; almost $9 million through the Family Benefits Act, and over $11 million through Children's Aid Societies for activities attributable to alcoholism.

Of the more than $1 billion spent by the province through these various agencies plus the Addiction Research Foundation, the taxpayer paid $134 million in one year for illness and disruption attributed directly to alcoholism—and I must emphasize that this figure does not include physicians' fees, municipal welfare payments, the costs to business and industry through loss of productivity and manpower (and we know from our research in industry that these costs are enormous). Moreover, the $134 million does not reflect the fact that alcohol is involved in over 50% of deaths due to traffic accidents in Canada.

The Options

In any democratic society it is the majority of individuals who must ultimately be convinced of the need for social action. No government, elite study group, or national commission can make decisions about social policy independently of the wishes of the majority—at least not for long.

If the public wants greater access to chemicals such as alcohol, if it wants the freedom to drink in the parks and picnic grounds, or on the other hand if it wants to ban their use from public functions, then the public's

representatives will have to submit to that course. That's the nature of our democratic process—and we wouldn't have it any other way.

The decision about how to respond to the growth of alcohol misuse or, in fact, whether to respond at all, is one that has to be made in the minds of individuals. And hopefully, it will be made on the basis of the best information possible.

The role of scientific agencies in this type of dialogue has been debated long, and generally the debate has been inconclusive. Do we limit our role to handing out information, to serving merely as advisors to governments and other social policy groups? Does our role stop at the compilation and dispensation of data or does it include projecting into the future by estimating the probable results if certain courses are followed? Does it involve developing different options for public action and forming some questions the public should be asking in order that it might chart a more rational course for future social policy?

I believe our course is clear: if we are to serve society in the most responsible manner possible we must take a more active role in the development of future social policy and this means going well beyond the collection and dispensation of data. People must know the consequences they will face in terms of economic, health, and social costs if we continue on our present course to make alcohol an essential component of our everyday lives.

In all the vast scientific literature concerning alcohol and its use, there is no more thoroughly researched area than that showing the relationships between alcohol consumption levels and the alcohol-related damage.

Without exception, nations that have high alcohol consumption levels have the greatest prevalence of alcohol-related illness. The more people there are in any society who drink—even though most may drink moderately—the more alcoholics there will be, and the greater the incidence of alcohol-related damage. There is simply no country in the world where this equation has been upset.

More liberalization means greater use of alcohol, and greater prevalence of disease and death as a consequence. Even though the specific components of liberalization—such as permitting alcohol at sidewalk cafes

and park picnics—might seem innocuous in themselves, they add up to a pattern that predisposes to saturation.

The development of social policy does not begin and end with isolated actions such as licensing one specific social club to serve beer or liquor. But it is dependent upon an integration of all these actions into a discernible pattern and into a clearly developed thrust.

Consequently, though it may seem backward to hold the line at extending liberalization in certain isolated cases, we must look at the whole picture and we must decide what it is we want relative to the role that alcohol is to play in our lives.

It is imperative that now, with so many decisions about control legislation facing us and with a public still largely unaware of the potential consequences of these decisions, we stop and look around us and decide what we want for ourselves and our children. And if that means placing a moratorium on further steps toward liberalization until we can make these decisions on the basis of information, and sound judgment, then we should not be afraid of making that proposal.

The Alternatives

In looking at some of the measures that could be used to try to reduce the impact of alcohol use on society, we have conducted very intensive studies of different policies as they have been applied in Canada and other countries. We have also sought to gauge the success—or lack of it—of these measures.

For example, we have studied the policies of controlling the number and types of outlets as well as the control of days and hours of sale. We find that except for remote areas where outlets are not plentiful, the *number* of outlets does not really exert a great influence on the level of alcohol use. On the other hand, we find that an expansion of the *variety* of outlets does add new drinking customs and styles, and this type of diversification may in fact lead to an over-all increase in consumption.

Studies of the control of days and hours of sale have so far been inconclusive but we are continuing to look at this area carefully.

As for the effects of advertising, we find there is no reason to believe

that alcoholic beverages differ in any way from any other consumer goods. Volume and pattern of alcohol sales are affected by advertising just as are sales of television sets or cars. There seems to be no question, judging in part from the industry's own use of the media, that advertising—particularly by television—exerts a powerful influence over drinking styles and particularly over the developing habits of young people.

Lowering the drinking age from 21 to 18 has been under intensive study since well before the actual legislation was passed and there is clear indication that the drinking within this group, and quantity consumed, has risen very substantially.

The application of more or stricter legal sanctions on public intoxication has been studied widely in many countries, but actually it seems to have little effect on the rates of alcoholism. Indeed in some countries—such as France and Italy—there is a high rate of alcoholism but relatively low rates of arrest for drunkenness.

In recent months we have been hearing a good deal about the advisability of instituting differential taxation to encourage "drinks of moderation." This is based on the theory that beer drinkers are less prone to alcoholism. This however is simply not borne out in a vast number of studies, and in fact, in countries such as Australia, Czechoslovakia, West Germany, and in some parts of Ontario, beer is the principal and sometimes exclusive beverage used by many alcoholics.

It is not the type of alcoholic beverage, but the total consumption of absolute alcohol that really matters.

However, research *does* show that the relative cost of alcohol does exert a predictable influence on consumption.

Data drawn from many nations throughout the world show clearly that the lower the cost of alcohol (and cost here is reckoned not in absolute dollars but in terms of personal disposable income) the greater the consumption of alcohol and the higher the rate of disease and death associated with its use.

This is an important factor when we consider that it requires a far smaller portion of one's weekly earnings—considering wage levels and prices of

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other consumer goods—to buy a given quantity of alcohol in Ontario today than it has for several decades.

From 1949 to 1969 per capita disposable income has increased 57% while the average price of liquor and beer (in relation to today's incomes and dollar values) has actually declined. During this time span the price of wine in absolute terms has increased, but only 28%—half the increase in real income.

This, therefore, is the picture as we see it today: alcohol is cheaper than it has ever been, society is becoming more and more conditioned to its use under a greater variety of conditions, and society also seems bent on pursuing policies that might ultimately lead to a saturation point as exemplified by certain countries.

In confronting this situation we have a choice: we can allow the trend to greater consumption to continue, which means we must develop new means to meet the consequent health and social costs of increased alcoholism and new techniques to handle the spread of alcohol-related problems. Or we can work to curbing or even reversing the trend to greater consumption.

If we follow the *first* course we must be perfectly clear about the enormous health and social costs related to alcohol misuse today, and we must be realistic about what these costs will become if we continue our relentless movement toward saturation. We must recognize that this price will include:

1. Greater appropriation of health and social welfare funds for treatment of alcohol-related disease and rehabilitation of alcoholics;

2. Greater demands on existing and projected hospitals and medical personnel;

3. An increase in the prevalence of alcohol-related disease and death that will most frequently show up in the form of liver cirrhosis, heart disease, pneumonia, ulcers, cancer of the upper digestive and respiratory tract, suicide, homicide, and fatal accidents;

4. An increase in the rate of alcohol-related traffic accidents and death,

an increase in the costs to business and industry, legal and enforcement facilities, and an enormous human cost of disruption of families.

If we hold to the *second* option and seek to reduce the impact of alcohol on our lives then we must be equally frank about admitting the difficulty of our task.

In a society conditioned to more liberal drinking attitudes, anyone who runs counter to the trend will not be popular. Anyone who recommends using any of the control mechanisms I have mentioned so far will likely meet considerable resistance so long as the public remains uninformed about the reasons for that action, and the possible consequences to the health of our people if that action is not taken. In effect, the government would have little chance of moving ahead with social policies directed at reducing this consumption unless the public itself endorsed such policies.

This is the step that I believe must precede any imposition of external controls. And to create a climate in which such steps might be taken all of us must have a very clear picture of alcohol's increasing impact on society and the price we are going to have to pay if we opt for even more liberalization.

This is the challenge that educators in this field face.

We at the Foundation are very aware of the enormity of this challenge, particularly now that we are in the process of developing such an educational program with the active support of government. *We have to clearly, and effectively, show the people of this province the price they are paying in terms of disease and death for the privilege of using alcohol in ever-increasing amounts.*

We have to show the people in this province what it is they can expect if the trend to "continental" drinking continues to escalate. To do this we can't hide behind the sanctity of pure science and simply dispense isolated, objective particles of information.

We must use communication techniques available to us in the most imaginative and innovative ways possible to give the people of this province the information they need in order to make the wisest possible choice about the role of alcohol in their lives.

There is no question that without this key component of education, the imposition of external controls would have little chance of even getting started.

It has not been my intention today to serve as a prophet of doom, or to overwhelm you with the bleakness of the situation. But it has been my intention to put before you in as realistic and factual a manner as possible the challenge we face if we intend to curb the deep and disturbing impact that alcohol misuse is exerting on our social fabric.

Though the use of alcohol has been with us for many centuries, and a great many attempts have been made in the past to bring its use under control, I believe we have unique opportunities now to succeed where others have failed.

We have at least taken the first, few, quivering steps toward accepting alcohol as a drug, the drug most widely abused by our society.

We have made vast progress in collecting and assessing data on the real and potential effects of this drug, and we now have the mechanisms of this sophisticated electronic age to get this information through to individuals—the only ones who ultimately can and should decide what they want to do with their lives and the futures of their children.

Given all these things we have the potential, and the mechanism, and the expertise. What we need now is the determination.

THE HALFWAY HOUS

OR THE ALCOHOLIC

by Earl Rubington

Members of Alcoholics Anonymous, students of alcohol problems, and public health workers have all combined to make the movement for alcoholic rehabilitation a success. Their leaders, programs, objectives, and techniques for helping alcoholics to recover have all worked where other institutions persisting in established ways have failed. The broad social movement for alcoholism rehabilitation is now a going concern, having met the first test of getting results.

Movements arise when the existing social organization produces mounting dissatisfaction because of its failure to solve the presenting problem. In interposing its own workable solution to the persistent difficulty, the movement becomes socially organized in its own right. The second test of a social movement can be phrased in the question, Will success spoil the movement? When the movement becomes a going concern, maintaining organizational routine sometimes becomes more important than the movement's original goals.[1] The movement is then in real danger of becoming a member of the Establishment, if not an Establishment in its own right. Friendly critics of Alcoholics Anonymous, for example, decry its increasing tendencies toward formalization and reduction of sponsor-protégé relationships.[2]

The emergence, development, organization, and changes in the idea of a halfway house for the rehabilitation of homeless alcoholics can be understood best as a social movement. And at this very moment, the idea of a halfway house as a social movement seems rather insecurely poised halfway between meeting the first test of a movement, namely, getting results, and the second test, coping with its own organizational problems.

The present chapter analyzes this submovement at this critical juncture, halfway between obtaining results and solving the organizational problem.

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OGRAPHS BY VILLY SVARRE

The Situation of the Homeless Alcoholic

In categorizing the alcoholic, one can focus on his acts, his attributes as an actor, his situation, and the consequences of his actions for himself and others. All of these are most relevant, though the weight to be attached to any one of them will no doubt vary from time to time. But most critical is the social definition of the alcoholic and the alcoholic's definition of himself in response to that social definition.

The homeless alcoholic, then, is a person who has no regular membership in a family unit of whatever kind, is socially isolated, is usually jobless, and suffers more injuries than he causes through excessive drinking. What complicates this definition is that the person to whom it is being affixed may not agree with any or all of its particulars. Similarly, people who come into frequent contact with the person may or may not agree. The fact of the matter is that both will use whatever parts of the definition are convenient for them at that time, in that place, and in that situation.

For example, it may be convenient for the person so defined to claim that he is homeless if he seeks shelter, or to ask for work if he sees himself as jobless. Similarly, it may also be convenient for him to claim that he is an alcoholic if his self-inflicted injuries are more than he can handle. But, also, it may be convenient for him to claim that he is socially isolated when he is in search of drinking company. Much will depend on his situation and with whom he is talking at the moment.

The alcoholic's situation is most crucial in the formulation of both social and self definitions; for, inevitably, no one ever meets him when he exhibits the pure essence of homeless alcoholism. Everybody—well-wishers, rehabilitators, neutrals, or evil-doers—always meets him in a particular situation. The inability to define his situation correctly and to produce an adequate response to it is the basis for the persistent institutional failure that ultimately gave rise to the halfway house movement. And the simple, obvious fact is that the situation in which anyone, particularly those who are official agents of social control, confronts a homeless alcoholic is always one of transition.

It might be well to see him as the "man between." When drunk, he is between a state of social awareness and unconsciousness. On the street, sober, he is frequently on his way from jail, hospital, mission, or clinic

to a job, a "flop," a drinking group, or a solitary bottle. He may often claim that he is short only the price of a drink; supply his want, and he is off to the nearest bar or package store. There are, however, other shortages that cannot be met so easily. And it is these shortages that guarantee that, unless they are met, he will be back to ask for the price of a drink again, that he will continue to be in transition simply because no person, group, or agency can perform successfully in the role of go-between.

Most agents of social control, official or unofficial, punishment-oriented or treatment-oriented, meet the homeless alcoholic in transition. And, for the most part, it is usually at the point of release from an official establishment, such as a mission, a jail, a hospital. Invariably, the first words out of the man's mouth are "I just got out of..." And the reason the man is destined to meet some agent of social control (and alcoholism counsellors as well as police officers are here included as such agents) is because of some inability to cope with his acute release problem.

Upon release from an official establishment that has just finished housing, punishing, or treating him, the homeless alcoholic almost achieves pure essence. For now he is acutely homeless, socially isolated, jobless, and still very much the alcoholic regardless of how sober he seems to be at the particular moment. Given the fact that he generally lacks social skills for making contact with legitimate persons who uphold conventionality and has few technical skills to make any exchanges with them worth their while, he is thrust back upon meeting his transitional state in typical fashion—hunt up cronies, go in on a bottle, and while away the day in seeming nonchalance. Cronies answer the problem of social isolation; the bottle solves the problem of how he will define himself at that moment. Shelter for the night, the traditional "flop," even a job may all be obtained. But arrest and incarceration are soon to follow; and arrest for public intoxication activates the correctional cycle whose business is persistent institutional failure.[3]

The Social Background of Institutional Failure

A man who is homeless, socially isolated, usually jobless, and an alcoholic comes into frequent and increasing contact with agencies of social control. None, apparently, is able to assist the man in dealing with his transitional state so that he can permanently find a home, conventional associations, work, and sobriety. The simplest explanation, of course, is that the man

really doesn't seek these values; or that he seeks them, but in the wrong times, places, and circumstances; or that he seeks them, yet is really unable to manage them if he does realize them. No doubt all this is true.

But truth has an interactional character, for it takes at least two people to sustain a given definition of the situation. Agents and agencies of social control find their work with homeless alcoholics much easier if they define them at face value. And, since these faces are frequently dirty and unshaven and show the ravages of drink, it is easier to say "once a drunk, always a drunk." Here counsellor and client agree on a definition of the situation on which both of them can act, thereby creating the situation itself.

Obviously, the homeless alcoholic bears some responsibility for the failure of institutions to control him effectively. But these institutions, similarly, must bear an equal if not a greater responsibility for that failure. Study of the social conditions of this failure may suggest a set of conditions that might facilitate rehabilitation. Analysis of institutional failure may similarly suggest what gave rise to the halfway house as a social movement.

Social systems all have the dual task of defining and enforcing moral rule. Definition of, and instruction in, moral rule is called socialization. Enforcement of moral rule is called social control. Changes in complex modern society affect both socialization and social control and establish the conditions of institutional failure in rehabilitating homeless alcoholics. The words "bureaucratization," "industrialization," and "urbanization" sum up these far-reaching changes, which also make it possible, at the same time, for the halfway house movement to emerge.

1. Industrialization. First, a new social form for producing goods and services evolved. Industrialization consists of a special way of organizing the production of goods and services, making extensive use of machine tools. Agriculture, for example, today is highly industrialized, a rational business enterprise in its own right. One concomitant of industrialization is the constant upgrading of the social and technical skills of workers who will use the new tools. The other is a decrease in the need for a large supply of unskilled labor. The hobo, who followed the crops as a migratory worker, has all but disappeared, supplanted by a much older, but equally unskilled, homeless man who lives all year in the Skid Row quarter, who tries to comply with the independent cultural tradition of the hobo in a social situation in which the dependent role actually makes better sense.[4]

"Most agents...meet the homeless alcoholic... at the point of release from an official establishment"

2. Urbanization. Industrialization, in turn, only speeds up urbanization. More and more people now live in urban areas (for the first time, in 1960, the U.S. Census showed more Americans living in urban than in rural areas), and the trend continues unabated. Urbanization reduces the ability of the family to perform its socializing functions. There are now several social codes from which to choose, as well as more opportunities to disobey them without being caught. And, as all studies show, the frequency of regular drinking rises with the degree of urbanization. There are more stresses and strains in urban life, and therefore more chances that some people will seek relief from their acute personal and social discomforts in extensive drinking.

3. Bureaucratization. Institutions of socialization and social control, such as the school on the one hand, and the prison or mental hospital on the other, become increasingly bureaucratized. A new social form for the administration of persons who staff large, complex organizations and who are sometimes inmates in them emerges. Impersonality, specific rules, hierarchy, and specialization of tasks characterize bureaucracy.[5] But, other things being equal, bureaucratization in social control agencies, in turn, frequently means that organizational success often depends upon therapeutic or correctional failure.

Routine processing of the many inmates who come before agents of social control in these large, complex organizations becomes the rule. Pilgrim State Hospital in New York, for example, is a skyscraper of the sick. Here, over 15,000 mental patients live in what some call a "human warehouse." Impersonality, formal rules, hierarchy, and task specialization cause clients to become faceless, to lose individuality, to become numbers, and to accept the stereotyping with which the organization manages them. The result is that prisons and mental hospitals succeed as going concerns only to fail as corrective or rehabilitative enterprises.

These are the social conditions that spell institutional failure in the rehabilitation of homeless alcoholics. These are the selfsame features that spelled failure in the rehabilitation of non-homeless alcoholics and spawned the birth of Alcoholics Anonymous. The established ways, for instance, of defining alcoholics and of ignoring, avoiding, punishing, or even treating them for their highly stigmatized condition all contributed to the perpetuation rather than the alleviation of their acute personal problem. Faced

with the persistent failure of persons, groups, and agencies to understand and cope with their dilemma, alcoholics had no recourse but to rally around the call of a leader. They banded together, met, formulated a program, set forth their objectives, and sought to change their situation. Their program worked, and Alcoholics Anonymous became a successful movement.[6]

There are ironies in the rehabilitation of alcoholics as a social movement. For the movement to prosper and grow, particularly so far as Alcoholics Anonymous are concerned, it must always seek out new clients. The members must "carry the message," they must seek out and make converts. For, in sobering up others, they themselves maintain a more secure grasp on sobriety, particularly in the early stages of AA affiliation. Yet for AA to be started and to gain adherents and a following, it was absolutely necessary to distinguish in the minds of recruits that one need not be a Skid Row bum to be an alcoholic. Until that distinction is made—and there are probably millions of people today who are still unable to make that distinction—the "hidden" alcoholic continues to a) deny his alcoholism or b) affirm it publicly only in the privacy of Alcoholics Anonymous meetings. Having succeeded in making this important distinction, the movement to rehabilitate alcoholics has now begun to turn more attention to the eyesore, the stereotype, the public drunk, to the homeless alcoholic himself. The movement can now seek out as clients those who were at one time most likely to endanger its own early beginnings.

Structural Principles of the Halfway House

The halfway house was born, then, out of institutional failure to cope with homelessness, social isolation, joblessness, and alcoholism. The man between, the homeless alcoholic, in a state of perpetual transition, required a social broker of some kind, an organizational go-between, if he were to negotiate the passage from deviance to conformity. A bureaucratic establishment could not fill this bill of rehabilitation. But how, one might ask, could a halfway house succeed where more organized, more powerful, bigger enterprises had ostensibly failed? Simply by turning the principles of organization of these enterprises upside down the halfway house has established the conditions of institutional success.

The new movement has spawned residential centres of many varieties: some are public, others are private; some are rural, others are urban; some are found in houses, others, in missions or in hospitals; some charge a lot, others charge nothing at all; some have limited lengths of stay, others,

unlimited stays—and so on. The list is capable of indefinite expansion.[7]

This seemingly endless variety, however, should not suggest infinite complexity. Behind this apparent complexity and variety there is a certain simplicity, which all halfway houses share. Certain factors, common to all, constitute the structural principles of halfway houses. They are four in number; all, as should be readily apparent, are reactions to bureaucratic structures.

1. Small Size. Large organizations make their clients feel like pebbles on the beach, or like cards, easily lost in the organizational shuffle. Once the clients come to feel that no one in the institution cares about their welfare, it is only a matter of time before they come to look upon themselves in exactly the same fashion. Eventually, being apathetic about themselves and their acute personal problems becomes for them a natural state of affairs. Thus they simply come to accept the large organization's definition of them.

No halfway house worthy of the name has more than 25 clients; some have only 10 or 15. In all of them there is an unmistakable trend toward smallness. Simply by reducing the number of clients, the halfway house makes it possible for the staff to get to know the client, and for the client to learn the getting-well role the staff would like him to assume in place of the deviant sick roles.[8]

2. Simple Rules. A large book of innumerable rules, complete with precise specifications of tasks and of who can and cannot do what to, for, and with whom, betokens bureaucracy. Some predictable consequences are extreme specialization, formalized routines, and the sluggishness that people associate with the word "bureaucracy" when it is used in evaluative terms. As the world drives on and on toward complexity, halfway houses strive for simplicity and "human" scope.

One means of accomplishing this is to have a set of simple rules, understandable ones, and a small and consistent number at that. Thus, a typical halfway house will insist on strict abstinence, have a curfew, and require the payment of rent and the performance of gainful employment "on the outside" and certain housekeeping duties on the inside. It may or may not require attendance at certain kinds of group meetings, such as AA or group therapy. Beyond that, there are no further formal

rules; and frequently these rules are never formalized, but are handed down by word of mouth and honored as practices rather than as precepts.

3. Reduction of Status Differences. Additional consequences of the bureaucratic process, arising from extreme specialization, are a set of powerful status differences between counsellors and clients. Eventually, given other problems, counsellors spend more time defending their social position than in helping their clients to get well. Size, numerous and complex rules, formal atmosphere, and marked status differences all conspire to cut down meaningful contact between counsellors and clients. What little contact is left is often negative in sentiment and neutral in outcome, if not actually antitherapeutic. At the least, communication between counsellor and client is non-existent or at outright cross-purposes.

Many halfway houses employ as staff counsellors men who are recovered alcoholics, frequently members of Alcoholics Anonymous. Many of these men were formerly homeless alcoholics, well-versed in homelessness, social isolation, joblessness, and alcoholism. As "experts" their rank and experience are therefore not so far removed from those of the residents that meaningful communication cannot take place. In general, even when counsellors in halfway houses are non-alcoholics, every effort is bent toward reducing status symbols that impede communication.

4. Informality. A large helping organization sustains an impersonal, matter-of-fact, social atmosphere. Formality, for the most part, describes its characteristic style of social interaction. Essentially, all participants are strangers. All deal with one another with but a fragment of their personalities, and usually that fragment is but the public behavior that their position in the organization calls for. The words "cold" and "distant" always come to mind when people describe their experiences in any of these vast social establishments. The lack of warmth and the social distance depend rather heavily on the personal fragmentation the large, complex organization actually requires if it is to function "successfully."

Again, in reaction to bureaucratic institutions, the unmistakable trend in all halfway houses is toward an informal, homelike atmosphere. Social arrangements reminiscent of a large, extended, and happy family seem to be the goal. Some are able to produce this atmosphere quite naturally by having staff and residents both eat and drink together. In addition to taking meals together, staff and residents drink a lot of coffee together

throughout the day. Here it may be true that the customs of the bar and tavern milieu have infiltrated the halfway house "culture." Now, however, the customs in the milieu enforce the norm of sobriety rather than inebriety.

These structural principles are the basic premises of the halfway house as a social movement. Born of the institutional failures of the complex agencies of social control, they have been established so that the halfway house may yield institutional success. The shift has been from big house to small house.

The ideology of the halfway house, upon which it bases its hopes for success, can be summarized as follows: as size decreases, residents have more of a chance to get to know one another as complete individuals. As the rules shrink in size and increase in clarity, interaction may prove much easier, particularly for persons not especially noted for their interpersonal prowess. And, with easier interaction, consensus becomes more likely. As status differences between expert and client shrink, communication can proceed more easily, reach its mark, and take effect. Informality, in making for a homelike atmosphere, can induce a desire to remain a member of the group, to abide by the rules, and thus to be subject to increasingly positive influences to change behavior, the prime objective of the halfway house.[9]

The Halfway House Movement at Midpassage

The movement itself is in a state of transition at the same time that it labors on behalf of homeless alcoholics who would negotiate their return to conformity. If it is to negotiate its own trip from tentative origins to steady growth, it has to pass the two tests of a social movement, as noted earlier: it needs to get results and then to solve the organizational problems that confront all social movements. These questions of results and administration can be considered under the four rubrics that follow.

1. Organization and Society. At present, relations between any halfway house and the larger society couldn't be better. "Halfway house" is a term to conjure with; under appropriate social conditions, one can even conjure up a building, a staff, and a budget simply by mentioning this magic term. Furthermore, the prestige and drawing power of the halfway house are not limited to alcoholic rehabilitation. Though halfway houses are hard to define, new ones appear almost daily in the world of treatment and corrections. There are, conservatively, about 50 halfway houses for

returning mental patients, besides the untold and growing numbers for paroled prisoners and drug addicts.[10]

Coupled with this growing organizational prestige, strangely, is a lack of concern about measuring the results the halfway house is uniquely constructed to obtain. At present, though there are signs of change, the claims of success for halfway houses must be taken on faith. Much of the literature on them consists, broadly, of testimonials, endorsements, institutional advertising, or even, occasionally, outright bragging. Though there are now, by conservative estimates, at least a hundred halfway houses for alcoholics in this country, perhaps only three of them have ever given any attention to obtaining an independent assessment of their effectiveness. Here a word to the wise may suffice. Unless halfway houses give some thought to independent studies of their functioning, they are very likely to disappear from the rehabilitation scene as fast as they appeared.

Enthusiasm sustains motivation for workers in this area and for the public at large. But, if this is not quickly used to obtain systematic data on structure and functioning, types of clients, and measures of effectiveness, the public will be raising questions that those in the halfway house movement will be unprepared to answer. Without these systematic answers, the prestige of the halfway house will be found to rest solely on loud voices rather than verified knowledge.

2. Relations among Organizations. Although the public relations of the halfway house movement are, in general, quite good, its relations with other agencies of social control, both within and outside the field of alcoholic rehabilitation, could stand a vast improvement. Many halfway houses open up without first seeing if there is a need for the services they seek to render, without consulting with other agencies servicing the homeless alcoholic population; and, once open, they blithely go their own way. Having found the one true message, they cannot waste time in listening to others, since the other agencies have been tarred with the brush of institutional failure.

This form of parochialism can fast wear out a welcome that may not have been the warmest to begin with. People in the halfway house movement have a splendid new idea, based on sound principles of rehabilitation of alcoholics. Nevertheless, they are Johnny-come-latelies to rehabilitation in general, and to rehabilitation of alcoholics in particular. Social welfare

is rapidly becoming one of this country's largest industries. If halfway houses cannot learn the techniques of community organization and how to get along and co-operate with the entire network of social agencies, they will very quickly become the junk heap of alcoholic rehabilitation, performing for that network of agencies the same role as Skid Row performs for the average large American city.

3. Internal Relations. All reactions, of course, invite, and usually get, their own reactions in turn. In quite properly reacting against the faults of bureaucracy, halfway houses came into being as a defense against institutionalization. There are signs, however, that an excess of informality can have negative effects in two important areas, therapeutic policy and orderly administration.

(a) THERAPEUTIC POLICY. In the halfway house, the house director is a key figure, perhaps the dominant one, the one setting the over-all stamp on the manner in which therapeutic policy is shaped and executed.[8] This concentration of power leaves room for personal feelings to play a large part, and makes it difficult to know if a simple rule in a supposedly simple organization is really a rule or not. Charismatic leaders of halfway houses may be the most effective leaders, but it is still hard to routinize charisma. Stability is an essential in any therapeutic policy, and homeless alcoholics, perhaps more than other social deviants, need more, rather than less, routine.

(b) ORDERLY ADMINISTRATION. The staff in some halfway houses, other things being equal, would much prefer to be alcoholism counsellors rather than administrators or overseers. Frequently, because of shortages, however, the staff often finds itself performing both roles. It is very hard to develop counselling rapport with a man whom you must also command, and sometimes even punish. Yet, in the solution of this role conflict (usually in favor of being a good counsellor), orderly administration suffers.[11]

In addition, there are signs that house operations and fiscal management lack system. Naturally, everyone on the staff is most anxious to get on with the business of rehabilitating homeless alcoholics. Detail work is bothersome; in some state-operated halfway houses, it is seen as "red tape" or the "busy" work designed by administrators who don't truly understand the first things that come first in rehabilitating the homeless alcoholic. However, unless more attention is given to running the allegedly

simple organization in accordance with sound methods of administration, the entire halfway house movement is in jeopardy.

4. Counsellor-client Relations. Counsellors on halfway house staffs, particularly when they are recovered alcoholics, often victimize themselves, perhaps more often their clients, by their beliefs. Abstinence sometimes makes a staff heart grow harsher as contact with difficult clients increases. A natural defense is the use of typifications, or unkind categorical generalizations, about the resident alcoholics.

For instance, the alcoholic is widely known for his dependency. Halfway house ideology requires the staff to get clients to transfer dependency on alcohol to the halfway house, its staff, its rules, its residents, in some therapeutic combination thereof. Unless some care is exercised, staff members can find that they have actually created a dependency that they are not very anxious to break, for there is power in such relationships. Without the natural checks and balances that can operate against such relations in a somewhat larger organization, the staff may become manipulative without being therapeutic. When that comes about, it is sometimes difficult to distinguish the manipulator from the manipulated. Therefore, unless counsellors on halfway house staffs become aware of the kinds of feelings that underlie these relationships, they are apt to extend the very dependency they seek to check.

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THE NATURE AND LIMITATION

by Harold Kalant
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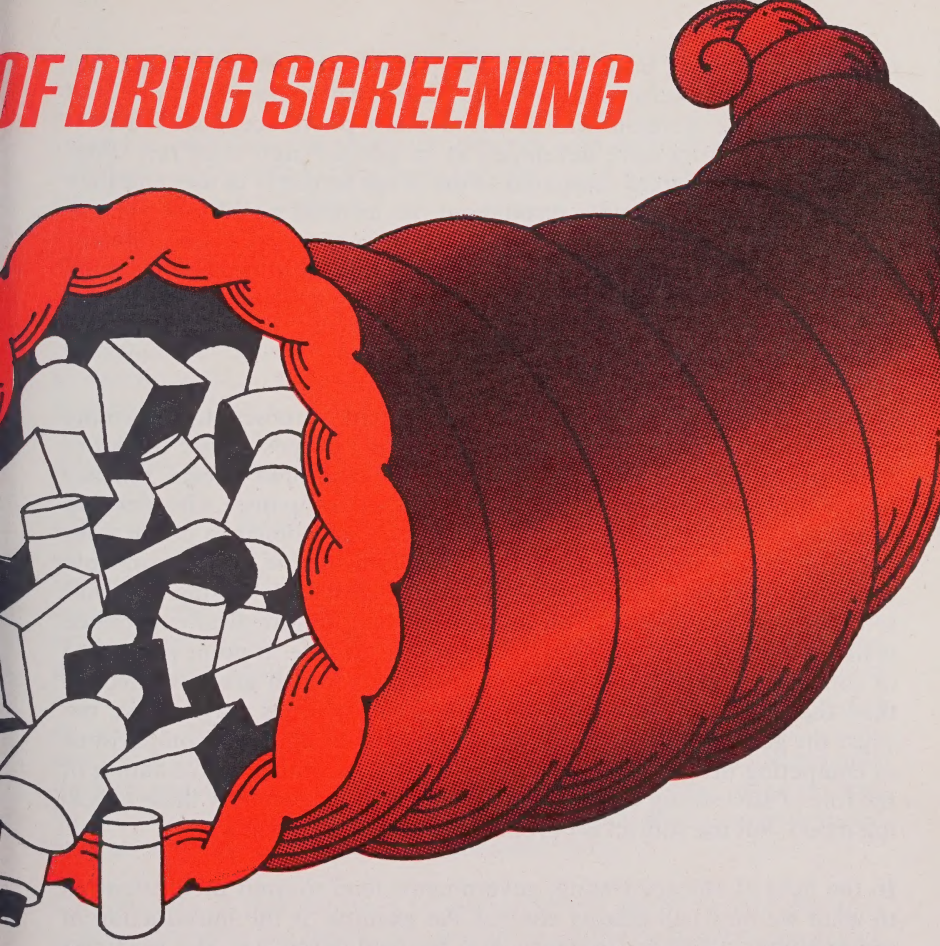
ILLUSTRATIONS BY WALTER STE

OF DRUG SCREENING



Over the centuries in which new drugs were introduced to the practice of medicine on a chance basis, at infrequent intervals, the testing of drugs was largely a matter of experience gained during the practice of medicine. New agents appeared so infrequently that their acceptance or rejection

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could scarcely have been considered a serious concern of anyone but physicians and the occasional unhappy patient who suffered an undesired effect. With the development of the modern pharmaceutical industry, however, new drugs have developed at an astonishingly high rate, their potencies are very great compared to the drugs formerly in use, and they are disseminated so rapidly throughout the medical world that the risk of serious, undesired effects is now a major concern to many different people. Accordingly, governments have been forced to become involved in the development or regulation of drug screening methods for the protection of the public.

Why Are Drugs Screened?

Drugs are screened essentially for two different purposes: to determine their efficacy as therapeutic agents for specific purposes, and to assure their safety with respect to possible toxic or undesired effects. Efficacy is primarily the concern of the individuals or companies who develop new drugs. A drug which does not do what it is claimed to do, or does not do it as well as agents which are already available, will in principle not be accepted by the medical profession. Intensive advertising may lead to temporary acceptance of an inferior product, but medical experience is likely to lead to its rejection in due course. A case in point is the fate of some ill-starred combinations of antibiotics, which are less effective than the separate ingredients.[1] Over-the-counter drugs may survive because the general public is not in a position to make objective comparisons of competing drugs. This suggests the need for a critical examination of the role of advertising in the promotion of drugs, particularly those affecting mood, but the subject is beyond the scope of this review.

In the field of efficacy testing, governments tend to limit their attention to what we may call quality control. An example is the introduction of specifications for purity, potency, and bioavailability—i.e., the readiness with which the stated amount of drug in a given preparation can enter the body and exert its intended effect.[2] The function of government agencies in this connection is basically no different than that of any consumer protection service.

The main concern of governments with respect to drug screening is the question of safety. Most governments now have a rather elaborate set of requirements for early screening before a drug is permitted to be used either in clinical trials in man, or in routine medical practice. The purpose

of these tests is primarily to ensure that the drug, in the doses and modes of administration in which it will be employed clinically, has a sufficiently low likelihood of producing toxic or undesired effects. Among the latter, there has recently been particular concern with individual and social ill effects arising from what has been variously called "drug abuse," "addiction," or "drug dependence."

Every Drug Has Potential Toxicity. Any agent which modifies in any way a function of the body can, in sufficiently high doses, modify that function to a degree which will prove harmful rather than beneficial. The purpose of screening is therefore not only to identify but to quantify the risk, i.e., to determine the relationship between beneficial or therapeutic effects and harmful effects at any given level of dosage. Fundamentally, the screening leads to a cost-benefit analysis in which the potential hazards must be weighed against the potential therapeutic value.

One can never anticipate either all the potential therapeutic actions or all the possible hazards which may arise in the use of any new drug. In general, the screening methods employed to detect drug hazards are therefore empirically based. In other words, as experience reveals a new type of harmful effect which had not previously been known, the screening methods incorporate new procedures designed to test for the new hazard in future drugs. Therefore, screening is never finished, because new types of toxicity may be identified after the drug has been in use for some time. This means that screening, properly defined, must include not only the tests which are used in advance of the release of a drug to the market, but also a continuing monitoring of possible ill effects which can be detected only after the drug has been in use for some time.

The purpose of this review is to outline briefly the logic and methods of drug screening, the limitations and values of the procedures employed, and some suggestions of possible future lines of development.

Objectives and Methods of Drug Screening

New drugs arise from a number of different sources. At the risk of some oversimplification, we can identify five categories.

1. Folk Lore and Folk Medicine. Some of the most valuable drugs in current clinical practice have been adopted, in improved form, on the basis of previously known therapeutic roles in folk medicine. New drugs which

come via this route are relatively easy to screen, because there is already a clear indication of the intended use and probable action. One of the classic examples is digitalis, which Withering explored in the treatment of heart failure because of its use by a local folk healer in the treatment of "dropsy."[3] The European explorers who brought curare to Europe knew that it was used as an arrow-tip poison by Indians of the upper Amazon jungle, and that it paralyzed the animals struck by their arrows. This naturally directed the attention of Claude Bernard and later pharmacologists to explore its use as a muscle-paralyzing agent, which was subsequently employed as a muscle relaxant during anaesthesia. Cinchona bark was used by Peruvian Indians for the treatment of fevers, and this fact directed the attention of later investigators to examine its specificity in the treatment of malarial fever; this in turn led to the exploration of its use for killing the malaria parasites.

2. Chance Observation. One of the most striking of this manner of discovery of new drugs is that of penicillin. Fleming observed, and recorded, the fact that chance contamination of bacterial cultures by a species of common mold caused inhibition of growth of the bacteria in a zone immediately surrounding the clumps of mold. Florey and Chain exploited this observa-

tion to isolate from the growing mold the substance which was directly responsible for the antibacterial action.[4]

3. Systematic Chemical Manipulation of Existing Drugs. This is probably the main route of development of new drugs today. A large number of derivatives of a known chemical are prepared by systematic stepwise modification of the chemical structure, and the derivatives are then screened to see how the spectrum of actions of the original drug is modified by the successive chemical changes. This may lead to specialization of the effect in a particular direction which makes one of the new derivatives better than the starting substance for a particular therapeutic purpose. For example, when sulfanilamide was first introduced for its antibacterial action, it was observed to have a number of side effects. One side effect was a tendency to cause acidosis by inhibiting the enzyme carbonic anhydrase. Selective chemical modification of sulfanilamide led to a new series of substances known as the benzothiadiazines which, in addition to varying degrees of carbonic anhydrase inhibitory action, also have other actions on the kidney which have made them the most widely used diuretics and antihypertensive agents in contemporary medical practice. Another side effect of sulfanilamide was a tendency to lower the blood sugar. A different series of systematic chemical modifications of the molecule led to the development of the oral antidiabetic agents in use today.[5]

4. Rational Synthesis of Specific Drugs for Biochemical Actions. As the level of sophistication of knowledge concerning various biochemical processes increases, a point may be reached at which it is possible to synthesize deliberately a compound which will affect a given enzymatic process in a desired way. Such syntheses depend upon a previously acquired knowledge concerning the structure-activity relationships of natural substrates for the enzymes involved. In this sense, therefore, the deliberate rational synthesis of drugs may be considered an extension of the previous approach.

For example, the understanding of the mechanism by which sodium and bicarbonate are transferred across the wall of the tubules in the kidney indicated that the enzyme carbonic anhydrase played an essential role in the reabsorption of sodium. Acetazolamide was known to be a carbonic anhydrase inhibitor, and it was therefore predicted that it should act effectively as a diuretic by impairing the renal reabsorption of sodium ion. Pharmacological tests confirmed this prediction. A more elegant ex-

ample is that of allopurinal, used for the treatment of gout. The biochemical investigations of the conversion of purines to uric acid had established the structural requirements of the purine molecules with respect to their ability to bind to the enzyme involved in uric acid synthesis, as well as to be effectively converted to uric acid. It was then possible to make a substitution on the purine molecule which would permit it to bind but not to be converted to uric acid. Such examples are still relatively scarce in the development of new drugs.

5. Systematic Screening for Specific Therapeutic Purposes. Occasionally, a particular treatment requirement is considered so important that a mass screening program will be undertaken to discover suitable new drugs. An example is the screening program which has been operated for some years by the National Cancer Institute in the United States, for the testing of potential chemotherapeutic agents for cancer. Any agent which is proposed, regardless of the presence or absence of a pharmacological rationale, and regardless of the source of the material, will be tested on a routine basis.

Given such a diversity of sources of new drugs, and such a wide range of materials to be tested, we should not be surprised that screening must cast a very wide net indeed. *No drug has only one action.* Therefore screening for both therapeutic and toxic effects has to cover as wide a range as possible of potential actions.

Therapeutic screening usually includes a series of steps designed to examine a whole range of possible pharmacological effects. In practice, the new drug will be given over a range of doses to rats or mice, and the animals will be observed in relation to a check list of different effects: Do they go to sleep, have convulsions, or become hyperactive? What happens to their breathing? Does the fur bristle, or the tail stiffen? Does the pupil dilate or constrict? Is the heart rate or blood pressure affected? Is food intake altered, or response to painful stimuli reduced?

From these and similar observations made according to the check list, the investigator obtains some indication of the most promising leads to explore in more complex types of study. For example, a drug which appears to affect the heart or circulation will be studied for its effects on the contractility of the isolated heart or strips of heart muscle. Effects on blood pressure will lead to an examination of drug actions on the sympathetic

and parasympathetic nervous systems, and the biochemistry of norepinephrine and its receptor interaction, or on the response of the brain to incoming stimuli from blood pressure receptors in the walls of blood vessels. If a new drug shows a clear effect on the behavior of the animal, suggestive of a major action of the central nervous system, the investigator may go to more complex tests such as the Bovet-Gatti profile of drug effects on various forms of spontaneous and conditioned behavior.[6]

Such screening may indicate that the new drug has a relatively high degree of selectivity for one specific type of therapeutic indication, or it may reveal a variety of new uses for a drug which was previously considered promising for one purpose only.

An example of the latter situation is provided by chlorpromazine. This drug was originally introduced as pre-operative medication intended to improve relaxation of the patient under anaesthesia. It was found to lower the body temperature, and this led to its employment in surgical hypothermia such as that used in cardiac operations. Its relaxant effect led to its exploration as a major tranquillizer in the treatment of schizophrenics. Laboratory testing revealed that it was also a potent local anaesthetic, an antihistaminic, and an antiemetic. This latter action led to its use for the treatment of motion sickness, nausea and vomiting, and stimulated the development of a whole line of derivatives of chlorpromazine with a greater ratio of this effect to other actions. Chlorpromazine was also found to be a moderately effective blocker of noradrenaline, and consequently to have a blood pressure lowering effect similar to that of reserpine. Its local anaesthetic actions suggested that it would also have a membrane-stabilizing effect, like that of quinidine, which could be used in the treatment of cardiac fibrillation.

This example makes clear the need to have as wide as possible a range of screening procedures, in order not to miss potential beneficial effects of drugs in addition to the action that was originally being investigated.

Obviously, such a process cannot be called looking for a needle in a haystack, because the investigator does not even know it is a needle that he is looking for. A screening procedure is really an attempt to find whatever there may be in the haystack—needles or otherwise. Its value is determined by the suitability of the tests used and by the economic cost of the screening relative to the potential values which may be found.

The area of behavioral effects is perhaps one of the best illustrations of the limitations of available methods. Screening procedures such as the Bovet-Gatti profiles, though they may be the most sophisticated search devices available to date, are relatively crude methods of differentiating drugs which may have selective actions in psychiatric abnormalities. Since there is not yet a suitable animal model for schizophrenia or for manic-depressive psychosis, new drugs have to be tested for behavioral effects on normal animals which may have relatively little predictive value with respect to their actions in disease states.

It is equally true that the toxic effects can be extremely variable and unpredictable. Some toxic effects are simply the quantitative exaggeration of the same action which is employed therapeutically. Digitalis in large doses may produce heart block or ventricular fibrillation by a mechanism which is fundamentally the same as that which underlies its beneficial effect in heart failure or atrial fibrillation. In the same way, amphetamine psychosis is probably a manifestation of the same process of central nervous system arousal which underlies its beneficial effects in preventing fatigue or relieving depression.

In contrast, other toxic effects may be apparently unrelated to the therapeutic actions of the drug. For example, elevation of body temperature by large doses of amphetamine is probably not directly related to the arousal effect, although both may be connected with the actions on release of noradrenaline in different parts of the central nervous system. A recently reported toxic effect in amphetamine users in necrotizing angiitis, a condition characterized by scattered foci of inflammation and destruction of tissue in the walls of blood vessels, which some investigators believe to be an allergic reaction quite unrelated to the primary effects on the central nervous system.

Systematic chemical manipulation of the drug molecule may alter the ratio of one effect to another, so that in addition to increasing a specific desired therapeutic effect, it may greatly enhance the severity or probability of an unrelated toxic effect. For example, the conversion of amphetamine to paramethoxyamphetamine ("PMA"), in addition to enhancing the hallucinogenic effect in a mescaline-like fashion, also greatly increases the hyperthermic effect of amphetamine, and a number of deaths have recently occurred in Ontario among illicit users because of the intense fever.

Most of the foregoing description relates to a search for qualitative infor-

mation concerning the kinds of effects which a new drug may produce. But screening also deals very importantly with quantitative assessment, i.e., with defining the frequency and intensity of effects, both therapeutic and toxic. When initial screening has shown a new agent to have enough promise of clinical usefulness, the screening must be extended to include quantitative studies not only in individuals but within populations. Studies within the individual aim at establishing the difference in dose-effect relationship for the desired therapeutic actions and the toxic actions. Progressively larger doses are given, and one observes the threshold doses at which the various effects appear. The objective is to determine how large a margin of safety there is between the doses necessary to produce the desired and the undesired effects.

For example, low doses of amphetamine tend to produce primarily arousal, increased heart rate, pupillary dilatation, and other effects similar to those of sympathetic nervous activity. With much higher doses there commonly appear sensory illusions which, at least in some patients, may become structured and give rise to hallucinations and delusions of persecution.[7] Mescaline is known primarily as a hallucinogenic drug, which produces characteristic patterns of colors, light flashes, and geometrical illusions. At lower doses, however, it also produces amphetamine-like effects on

the heart rate, the pupil, and other organs innervated by the sympathetic nervous system. This similarity is not very surprising, since mescaline is closely related chemically to amphetamine and is in fact a trimethoxy-amphetamine. They differ in the degree of separation between the doses required for the sympathetic nervous system effects and the effects upon higher sensory and interpretive functions. As the doses of both compounds are raised, the overlap in their properties becomes more and more marked and specificity tends to disappear.

When the screening is extended to a whole population, variability between individual members of that population is encountered with respect to the sensitivities to any given effect of a drug. A simple analogy is the common experience of the spoiled egg salad at a large picnic. The whole group attending may be exposed to the same degree of staphylococcal food contamination; yet some are completely unaffected, some suffer only mild cramps, and others may have to be hospitalized for severe food poisoning.

The screening of a new drug should ideally include large-scale testing on whole population groups, but this is seldom done because of expense, and also because the drug is usually intended for some therapeutic purpose which is unlikely to be applicable to a large, healthy and essentially normal population. One striking example of such a large-scale test was that conducted by Jacobsen and his colleagues on amphetamine when this was first introduced into clinical use in Denmark.[8] Over 1,000 healthy, normal people were given the drug to take on a regular daily basis and were asked to record their symptoms daily. The majority of these subjects experienced mainly the stimulating and fatigue-postponing effects, which most of them found to be quite pleasant. For them, the only untoward effects were a certain tendency to sleeplessness at night, and some reduction of appetite. In contrast, a significant minority detected mainly the autonomic nervous effects such as the rapid pulse rate and palpitation of the heart. Most of these subjects found the sensation quite unpleasant and indicated that they would not ordinarily wish to use the drug. A comparable result was obtained by Beecher in his early studies of the subjective effects of morphine.[9] Only about 10% of the normal subjects receiving this drug for the first time found the effect pleasant; the rest found it unpleasant, primarily because of nausea.

There is, however, one important difference between screening for therapeutic and for toxic effects. The therapeutic effects are in general confined

to the same individual who is receiving the drug, and to the period of drug administration. In contrast, the toxic effects may outlast the period of drug administration, and may also be exerted upon the later generations born of the subjects receiving the drug. Therefore the strategy of toxicity testing, as opposed to therapeutic efficacy testing, must include as least four different types of assessment:

1. Acute toxicity testing involves the determination of dose-response curves for noxious effects, and the definition from these of a standard measure of toxicity or lethality such as the LD 50.

2. Chronic studies involve the administration of the drug in doses and over periods of time related to the expected patterns of clinical use. Structural and functional disturbances are monitored by a variety of physiological, chemical, and anatomical examinations. This would include such examples as the production of obstructive liver disease, suppression of blood cell formation in the bone marrow, precipitation of diabetes, impairment of learning or memory, and so forth.

3. Delayed manifestation of toxicity refers to toxic effects found long after the administration of the drug has been discontinued. A well known example is the onset of lung cancer, which may occur years after the person has stopped smoking. The stimulus to cancer formation is presumably the accumulation of carcinogenic tars from the smoke which has condensed in the lungs. However, a lengthy period of local tissue effect is required for the production of cancer, so that the onset of the demonstrable disease may be considerably delayed.

   A less well known but equally dramatic instance is the production of permanent brain damage by mercury intoxication. Neurobiologists have established that there is a slow gradual decline in the number of functioning cells in the brain once the point of full maturity has passed. There is a sufficiently large reserve of brain cells that the functional effects of this steady loss do not become evident until the onset of what is recognized as senility. Chronic mercury intoxication is believed to accelerate the rate of brain cell destruction, so that the same aging process occurs with greater rapidity, and impairment of learning ability and memory become evident in the form of a premature senile mental change.[10] It has been suggested recently that chronic heavy intake of alcohol, and of cannabis, may produce the same type of effect.

4. Damage to subsequent generations can occur for several different reasons.[11] Perhaps the commonest cause of teratogenesis is interference with the biochemical development of the fetus *in utero* at certain critical stages of formation of various organs and tissues. Thalidomide is a good example; infants have been born limbless because of an effect of the drug at a critical stage of the development and differentiation of the limb buds.

   Chromosomal damage, affecting the reproductive cells of one or both parents prior to conception, is another possible mechanism of damage to the offspring. On the whole, there is considerably less evidence to support this type of effect in relation to most drugs. It has been claimed, for example, that LSD, cannabis, caffeine, and many other drugs produce such damage but the studies which have been carried out to date are upon the chromosomes of peripheral white blood cells rather than reproductive cells. There is insufficient evidence to permit any conclusion

as to whether this type of damage is reversible or irreversible, and whether or not it can be specifically implicated in any abnormalities in the offspring.

A third mechanism by which a drug may affect the progeny is interference with the normal rearing behavior of the mothers. Animal studies, for example, have shown some drugs to interfere with milk production, or with the normal patterns of maternal care for the babies. While this has not been specifically invoked to explain any such effects in humans, it seems quite reasonable that drugs which severely alter consciousness or motivation could produce such effects if taken by the mothers of recently born infants.

Most European and Western countries have now made mandatory the pre-clinical testing of new drugs in all of these different ways. There is no difficulty thinking of still more tests of safety which it would be desirable to include, but each such addition increases the cost, duration and difficulty of the testing period. Any program of testing therefore represents a compromise between the maximum amount of information which it would be desirable to obtain and the maximum cost or difficulty which is acceptable for reasonable commercial operation of the pharmaceutical industry. This point is highly relevant to the following discussion of the limitations of screening.

Limitations of Drug Screening Programs

Selection of Subjects. Perhaps the most common and widely recognized problem associated with the choice of subjects in drug screening is the difficulty of extrapolation of results from one species to another. Most drug testing is initially done in rodents, i.e., in laboratory rats, mice, guinea pigs, and rabbits. This is easily explained because of the relative cheapness of large numbers of these animals, and the availability of standard-bred subjects which give reasonably predictable and reproducible results. There is now an abundance of evidence, however, indicating major differences among rodents, dogs, cats, sheep, various species of monkey and ape, and man.

These differences apply not only to the sensitivities to a particular effect, but also to the balance of the various effects produced by any given drug. A classical example is that of morphine, which in dogs, apes, and man

is primarily a sedative or behavioral depressant. In mice, it produces marked stimulation of the sympathetic nervous system, giving rise to the characteristic erection of the tail ("Straub tail"), hyperexcitability, and running. In the cat it produces similar sympathomimetic signs, and may provoke furious rage and attack behavior.

This species difference also applies to toxic effects. For example, one recent drug test gave evidence of visual impairment in the experimental animals being used, which almost led to rejection of the drug for trials in man. However, it turned out that the visual impairment was due to a bleaching of the macula alba in the eye of the rat. Man does not have a macula alba but a macula lutea, which is evidently unaffected by the same drug. This species difference might have led to the unjustifiable rejection of a therapeutically useful drug.

In other instances, the error could be in the opposite direction. There are many instances of species differences with respect to the predominant pathway of elimination of the drug. Cannabinoids, for example, are eliminated mainly in the feces in the rat, and in the urine of the rabbit. If a drug were initially tested in a species which eliminated it chiefly via the feces, while man excreted it principally in the urine, it would be very readily possible to fail to anticipate toxic effects when the drug was administered to patients with kidney disease. It has been remarked justifiably that man is "the ultimate experimental animal." In view of the numerous species differences, it is essential that clinical tests of new drugs in man be regarded as a continuation of the experimental assessment.

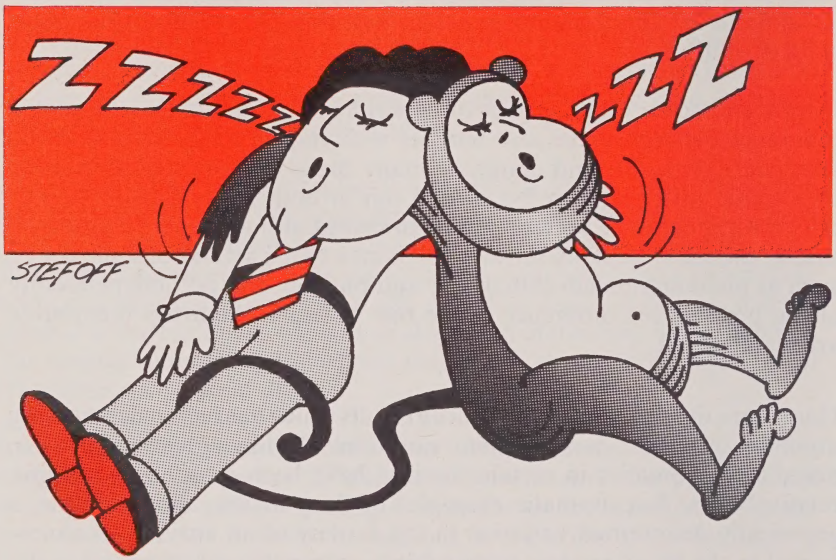
Differences in age and sex of the experimental subjects may also influence the results of drug trials.[12] Many biochemical systems are either absent or incompletely developed in the infant at the time of birth. The exact identities and severity of such deficiencies vary according to the species, as does the rate at which the systems in question attain their maximum activity in postnatal life. The drug metabolizing systems, for instance, are incompletely developed at birth. The newborn infant has an incompletely developed system for clearance of drugs and bile pigments from the liver, and for several weeks after birth has a slight degree of jaundice due to the excess bile pigments which are carried in the plasma bound to protein. Sulfonamides or aspirin, given during this stage, may displace the bile pigment from the plasma, causing it to pass into the brain where it may seriously damage certain brain centres, giving rise to the picture known

as kernicterus. The same doses are devoid of such toxicity in the older child or adult.

In rats and some other species of experimental animals, there is also a difference between males and females with respect to the rate at which they can metabolize and eliminate many drugs. The quantitative study of toxicity must therefore be carried out in both sexes. This difference does not appear to be present in human beings, although there is evidence that women may be more sensitive than men to the actions of some drugs, such as phenolphthalein cathartics[13] and phenothiazines,[14] independently of the possible sex difference in the rate at which the drugs themselves are metabolized.

One source of unpredictability of drug results which has received increasing attention in recent years is genetic variation.[15] Within a given population, hereditary anomalies in certain families have been recognized to cause relatively rare but dramatic examples of drug toxicity. For example, a genetically determined variation in the activity of an enzyme (cholinesterase) in the blood renders some subjects extraordinarily sensitive to the paralyzing effect of succinylcholine. This drug, used to produce muscular relaxation during surgery, is ordinarily broken down extremely rapidly by the cholinesterase once the infusion of the drug is stopped. Patients with the congenital variant of the enzyme break it down with extreme slowness and may remain paralyzed for an hour after the end of the injection. Another anomaly consists of a severe disturbance of energy metabolism in some subjects who are anaesthetized with halothane for surgical purposes. They respond to this drug by a sudden severe loss of control over the production of heat by metabolic reactions, and may actually die of severe fever.[16]

In other instances whole populations differ from each other with respect to genetically determined sensitivity to certain drugs. A classic example is Primaquin sensitivity among black and Mediterranean races. These groups have a congenital difference in the structure of hemoglobin in their red blood cells, which renders them extremely sensitive to the destruction of red blood cells by an effect of the antimalarial drug Primaquin. If toxicity testing were carried out only on white European or American subject populations, a comparable effect of a new drug could not be recognized in advance.



Change in Circumstances. Most of the drug screening procedure, particularly in the pre-clinical stage, is carried out on normal healthy subjects. In some instances there are no animal models or equivalents of the specific disease for which the therapeutic effect is desired. Therefore a drug which might be clinically useful could be overlooked. The tricyclic antidepressants such as amitriptyline and imipramine act simply as sedatives in normal subjects. In other instances, the situation may be the opposite in that the effect of the drug in the normal animal may parallel that in the human patient, but the effect may be markedly altered by the occurrence of certain diseases in patients for which no model existed in the animal. For example, the failure of metabolic breakdown of female sex hormones in the liver of the patient with cirrhosis may cause excessive hormonal activity, with uterine hemorrhage, in doses which would otherwise be considered clinically reasonable.

In other instances, changes in toxicity could at least in theory result from an alteration in the environment of the users. Abnormally high levels of mercury were recently found in the blood of residents living downstream from an Ontario river into which a paper mill poured large volumes of effluent contaminated with mercury. This might well be predicted to in-

crease the sensitivity to toxic effects of other drugs on the brain or bone marrow. Numerous recent studies have drawn attention to the hepatotoxicity of organic solvent vapors inhaled by the workers in many industrial plants. This might in the same way enhance the sensitivity to the hepatotoxic effects of a variety of drugs in ordinary clinical use. One may recall the manner in which disulfiram (Antabuse) was discovered as an anti-alcohol agent. Workers in a rubber factory, who employed the chemical for curing rubber tires, experienced severe flushing and fall in blood pressure when they drank even a small amount of alcohol.[17] In this instance, the coincidence led to the discovery of a clinical use for disulfiram. But it is not difficult to imagine numerous circumstances in which unexpected toxicities of clinically employed drugs might be due to such changed circumstances.

Uncertainty of Target. Toxicity screening is always made difficult by the fact that one is testing for unknown future complications which may arise during the clinical use of the drug. As a result, one is forced to set up methods of detection without being sure of what one wishes to detect. A classic example is that of iproniazid which was initially introduced for the treatment of tuberculosis. It was found that some of the patients receiving this treatment became euphoric, and some with clinical depressions were symptomatically improved to a marked degree. This action was shown to be correlated with an inhibitory effect on an enzyme known as monoamine oxidase. A number of similar drugs, also inhibiting the same enzyme, were developed for treating depressions in other patients, some of whom were also receiving other anti-depressant medication. In a number of cases, the other medication included amphetamine, and the combination of amphetamine with the monoamine oxidase inhibitors gave rise to severe toxicity including hypertensive crisis and cerebral hemorrhage. When the drugs were initially being screened for the purpose of clinical use as chemotherapeutic agents for tuberculosis, it would have taken extraordinary luck or genius to think of testing them for their effects on monoamine oxidase.

The implication of this is that screening is never definitive and must be treated always as an ongoing process. The evolution of the clinical uses of the drug may lead to toxicities that could not have been anticipated during the initial development. One outcome of this fact has been the establishment of extensive toxicity-reporting programs. Various govern-

ments have set up procedures by which individual practising physicians can report to central data gathering offices the occurrence of unexpected toxic reactions to drugs used clinically. Perhaps the most sophisticated development of that type is the Boston Hospital Survey[18] involving the establishment of a computer data bank in which complete details of the drug history of all patients experiencing toxic reactions are entered. This permits the recognition of relatively infrequent or rare patterns of toxicity arising from drug interaction which might not otherwise be detected by the individual physician.

It follows from the foregoing that the detection of toxicity is essentially a function of time, numbers of subject-dose exposures, and prominence. We have already referred to the significance of time as a factor in the detection of brain cell damage by mercury. Another example is the occurrence of abnormal pigmentation in the skin and viscera of psychotic patients receiving large doses of phenothiazines over long periods of time. This type of toxicity would not be detected in the ordinary type of screening program. The numbers of subject-dose exposures are important with respect to the possibility of detection of relatively rare events. For example, aminopyrine is capable of producing a severe and possibly fatal depression of white blood cell formation, probably by a type of allergic reaction. This event, though catastrophic, occurs in fewer than one in 10,000 subjects treated with the drug. Therefore, it would be extremely improbable that any ordinary clinical trial would be capable of detecting this type of toxicity. As a result it was not detected until the drug went into wide clinical use. A similar development occurred in relation to bone marrow depression by chloramphenicol. The diabetogenic effect of the benzothiadiazine antihypertensive agents, or the production of liver disease by the oral antidiabetic drug, chlorpropamide, were similarly detected after these drugs had entered routine clinical use.

The significance of prominence as a factor in the detection of toxicity is well illustrated by the studies of Schmidt and de Lint on mortality statistics among alcoholics.[19] In the present context, prominence is meant to refer to the degree of obviousness of the connection between the ingestion of the drug and the observed toxic effects. For example, cirrhosis of the liver has long been known as a complication of alcoholism, because it occurs with very low frequency among non-alcoholics. In contrast, heart disease, various types of cancer and peptic ulcer all occur with great frequency even among non-drinkers. Therefore the excess mortality due to

these causes among alcoholic populations was not identified as an effect of alcohol except by statistical retrospective studies involving large populations.

These factors have an important bearing on the economics of toxicity testing. The combination of large numbers and long times contributes importantly to the total cost of the screening procedure. The best possible toxicity screening may become, therefore, impossible in economic terms for the company which wishes to develop and market a new drug. It becomes essential to accept a certain element of risk of incompleteness in the advance detection of toxicity. One must therefore do a cost-benefit analysis with respect to the proposed new drug. If the drug is merely a variant of an existing one, the advantage of introducing it into clinical practice may not be worth the risk of possible new dangers which have not been detected in advance. In contrast, if the disease is a grave one and the therapeutic goal is urgent, one may be willing to accept a higher element of risk by putting the drug into immediate use even before long term toxicity screening is possible.

Possibility of Circumvention. A final shortcoming of screening methods is that they are applied only to substances which are deliberately introduced through the pharmaceutical industry as clinically useful therapeutic agents. They do not apply to substances which are not intended for drug use but which may nonetheless be used non-medically. A striking example was the toxicity of absinthe, which was a popular alcoholic drink at the turn of the century. A more recent example is the toxicity arising from the inhalation of solvent fumes by children and teenagers who practice glue sniffing. It is obviously impossible to apply drug screening procedures to all the substances which are used in industry, and which under normal circumstances would not be employed for internal use in a potentially dangerous fashion. Another instance is that of sodium glutamate, which is employed as a flavor-enhancing agent in Chinese food. Though this is subject to pure food regulations, it is not ordinarily screened for toxicity as a drug would be, so that there was no way of anticipating the effect it would have on particularly sensitive individuals manifesting what has been designated the "Chinese Restaurant Syndrome." This particularly uncomfortable combination of headache, nausea, flushing, and tingling can be produced by extremely large doses of glutamic acid or sodium glutamate, but occurs in some people even with the relatively small amounts that are used routinely in Chinese restaurants in North America.

Circumvention of drug toxicity testing also occurs in relation to the illicit manufacture of drugs for the "counter culture." There is nothing to prevent interested persons from obtaining the necessary information from the scientific literature to permit the underground manufacture of hallucinogens such as MDA or paramethoxy-amphetamine. The program of research aimed at the development of water-soluble derivatives of tetrahydrocannabinol for therapeutic and research purposes could, if successful, generate a similar problem. Substances manufactured and distributed by illicit operators are obviously not subject to drug screening or quality control.

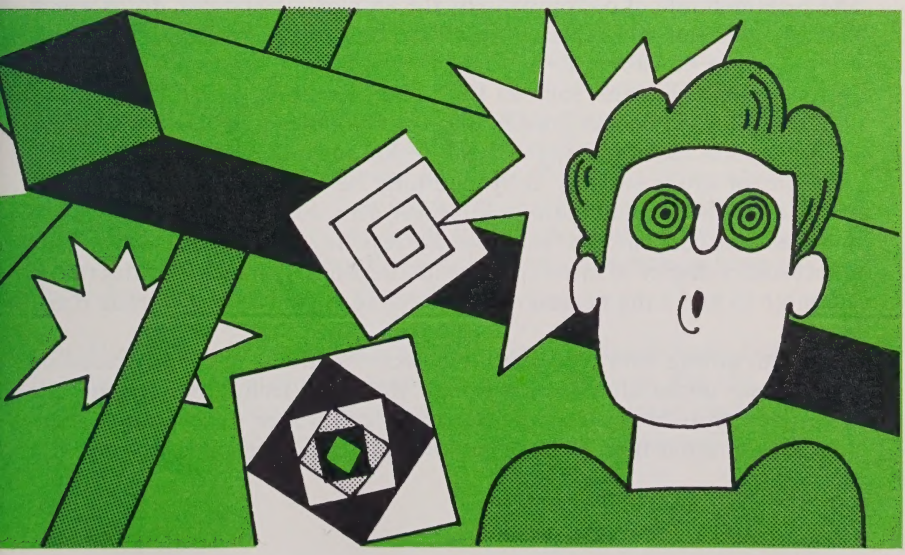
Use and Predictive Value of Tests of "Addiction Liability"

So-called psychoactive drugs, i.e., those which affect perception, mood, and behavior, have a high risk of use for non-therapeutic purposes. Such use can generate problems which have been variously designated abuse, dependence, or addiction, according to the varying concepts of the people who classify the drugs, and the varying severity of the problem. Accordingly, there has been considerable interest in the development of screening tests for "addiction liability." Compared to the over-all methods of drug screening, tests of addiction liability are limited and relatively crude. There are really two different fundamental questions which they seek to answer: (1.) What is the risk that a previously inexperienced subject, exposed to a drug for the first time, will acquire drug-oriented or drug-seeking behavior, or psychological dependence? and (2.) What is the risk that a regular user, employing large enough doses, will develop physical adaptation to

the drug, leading to physical dependence as manifested by a withdrawal reaction if drug administration is stopped?

To answer these questions, there are basically two types of test systems which have been developed. Ethical and economic considerations impede the wide use of human subjects for screening new drugs with respect to their likelihood of producing drug-oriented behavior. Therefore animal models have been developed for this purpose. There has been less ethical problem in using human subjects for testing new drugs for their ability to maintain physical dependence. The procedures, advantages, and limitations of animal and human models are considered next.

Animal Models. General screening for the behavioral effects of various drugs by techniques such as the Irwin or Bovet-Gatti profiles mentioned earlier, is used mainly for the identification of the class or type of drug to which a new agent belongs. One attempts to identify it as being amphetamine-like, mescaline-like, chlorpromazine-like, etc. The inference is that if it resembles a known drug in its actions, it is likely to have not only similar therapeutic applications but also a similar risk of misuse. The onus would be upon the developer of a new drug to prove any exception to this rule. If a new appetite suppressant, for example, were to demonstrate a spectrum of behavioral effects similar to that of amphetamine, even if less potent, there would be a reasonable suspicion that it would produce amphetamine-like patterns of toxicity and abuse.



The remaining animal models relevant to this question are oriented chiefly towards estimating or predicting the likelihood that a drug will be "abused" by humans. The objective is to study the ability of a drug to generate drug-oriented behavior in experimental animals, free of any preconceptions concerning predisposing or motivational factors such as are commonly invoked to explain "psychological dependence" in man. Full descriptions of the techniques and results obtained to date are contained in a number of excellent reviews, such as that by Schuster and Johanson;[20] and it is unnecessary to describe these in detail here. The basic approach is to insert a cannula into the jugular vein of an animal such as a rat or a monkey, and to connect to this cannula the outlet tubing from a pump which injects fixed quantities of drug solution at each stroke. The pump is activated by pressure on a lever to which the animal itself has access. The pump control can be pre-programed so that the animal will have to make different numbers or groupings of bar-press responses in order to obtain a drug injection. The objective of the study is then to see whether the animal will in fact self-administer the drug when it has the opportunity to do so, and how its drug administration behavior is influenced by changes in the circumstances and in the pattern of responses which it must make to obtain the drug.

The results of such studies have been, to date, encouraging and in some instances striking. With some drugs, notably cocaine, amphetamine, and opiates, mere availability for self-administration leads rapidly to a high and sustained rate of bar pressing by the animals. In general, drugs which monkeys will self-administer under these conditions are also drugs which are known to be "abused" by man. One striking exception so far is the group of hallucinogens, such as LSD and mescaline, which the animals do not appear to inject in greater amounts than they would with drug-free saline solution. One difficulty with this technique is that more concentrated solutions of drugs such as morphine may be injected much less avidly by the animals than more dilute solutions. This does not necessarily mean that the more concentrated solutions are less "rewarding," but may simply reflect such a degree of interference with the animal's motor abilities that it is unable to make the necessary bar-pressing responses to get more drug.

It is worth noting, however, that the objectives differ somewhat according to the drug under study even though the basic techniques remain the same. This probably reflects the impact of cultural or socio-political considerations, rather than basic behavioral-pharmacological reasoning. For

example, most studies of alcohol self-administration are aimed at determining the conditions under which an animal will self-administer enough alcohol to produce a sustained state of intoxication. The studies with opiates tend to concentrate upon whether the animal will self-administer enough to produce tolerance and physical dependence. The studies with psychomotor stimulants and hallucinogens tend to concentrate entirely on the question of the degree to which the animal's behavior becomes concentrated upon drug-seeking or self-administration. These different questions probably reflect certain underlying assumptions. For example, it is generally assumed that alcohol consumption is not an important phenomenon unless the amount ingested produces intoxication. To a large extent, thinking on opiates is concentrated on tolerance and physical dependence as the major risks. With cannabis, LSD, and other hallucinogens, the concern is with the use of the drugs *per se,* rather than with addiction as conventionally defined.

These differences illustrate one of the limitations of the animal models. This is the lack of sound knowledge concerning the extent of overlap between animal and human patterns of drug self-administration. All of the studies so far reported have been carried out with known drugs, and all those which animals have been found to self-administer were already known to be able to give rise to problems of drug dependence in man. But some drugs which are self-administered by man are not self-administered by experimental animals, as noted above for the hallucinogens. Is the converse true? Are there some drugs which animals might inject, but which humans would not? To date this possibility has not actually been explored because the method has not really been very widely used in the screening of new drugs. There is some suggestion that this might in fact occur, because monkeys will bar press much more eagerly to self-inject the very weak narcotic dextropropoxyphene than for morphine. In humans, dextropropoxyphene has extremely low abuse liability, compared to morphine or heroin. It is evident, therefore, that if animals should prove to work to obtain some drugs for which no human abuse problem exists, it would greatly reduce the usefulness of the technique for predicting dependence liability of new drugs in man.

Another limitation is the basic assumption that dependence liability, or liability to provoke drug-oriented behavior, is inherent in the chemical itself. The assumption is sometimes implicit that "reinforcement" of self-administration by the drug effects is equivalent to "pleasure" or "reward"

in man. Such an anthropomorphic interpretation probably accounts for the different orientations noted above in work on such various drugs as alcohol, opiates, and hallucinogens. The assumption appears to be that if humans self-administer these substances, it should be possible to arrange the experimental procedures in such a way as to induce animals to self-administer them also, in corresponding amounts and for comparable reasons. This simplistic approach ignores the fact that some drugs which animals will self-administer, when given at the same doses as those used in self-administration studies, have been shown to produce aversive effects in these animals.[21] An animal can even be trained to self-administer a punishing level of electric shock by an appropriate manipulation of the behavioral training. Therefore the development of "drug-oriented behavior" depends upon a drug-behavior complex, rather than on the drug alone. In humans this complex includes cultural and social factors in the user's environment, which helped to shape his drug-using behavior. Despite Beecher's observations on the aversive effects of first experience of opiates, or the well-known nausea produced by peyote, or the unpleasant dizziness which many people experience on first exposure to alcohol, the social context can have a very strong influence in shaping the level of acceptance and the selectivity with which the user comes to ignore unpleasant effects and perceive only the desired ones.

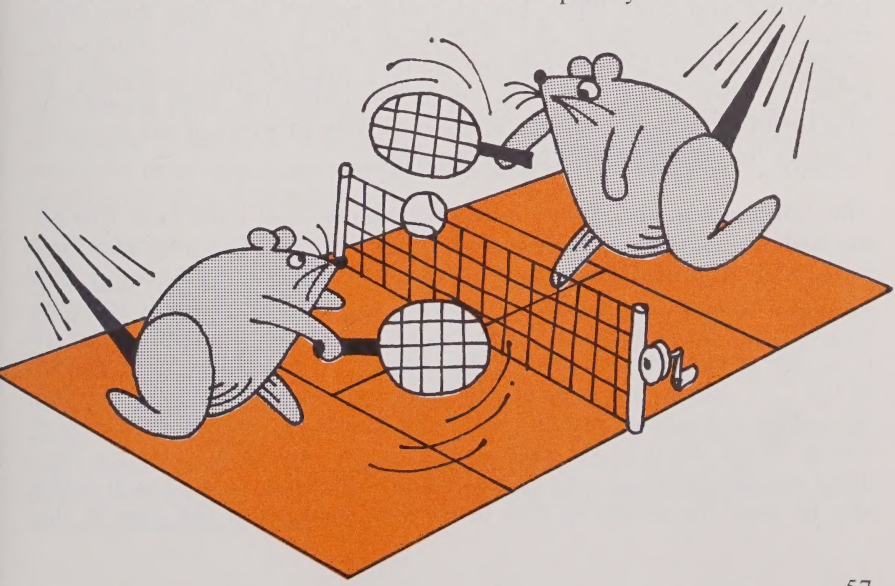
A third important limitation in these methods is the dependence of the drug response on the previous drug exposure history of the experimental subjects. For example, the aversive effects of drugs such as amphetamine or barbiturates, which were noted above, may disappear after repeated administration of the drug. This probably reflects the development of tolerance to some of the more physiologically disturbing actions of the drug, and possibly the replacement of these by some rewarding or quasi-therapeutic effects. For example, in an animal which has been made physically dependent by repeated administration of opiates, additional doses may serve to delay the development of withdrawal symptoms. In such a situation, a drug which an animal might not self-administer initially may be fairly readily self-administered following a period of obligatory exposure to the action of the drug.

In other instances, a drug which is not self-administered initially may become effective in this sense following a period of self-administration of another drug by the same animal. For example, cocaine is self-injected by rats or monkeys with extreme ease, while alcohol is not. But after

a period of self-administration of cocaine, an animal will inject alcohol with relative facility. This situation may give rise to misleading or erroneous conclusions in either direction. An examination of a new drug which initially was not self-administered, might lead to the conclusion that humans would not be likely to misuse it. Alternatively, its successful use in self-administration experiments after cocaine might lead to the conclusion that humans would use it non-medically. Either of these conclusions could be wrong.

There is clearly a requirement for a considerable increase in the sophistication of the experimental methods for this type of investigation. There is need for an increased complexity of models such as the second-order schedules described by Goldberg.[22] Another welcome development is the use of animals in social settings, such as the studies on alcohol consumption by monkeys in group cages,[23] for studying the effects of social interactions on the self-administration of drugs. By such developments, it may be possible to produce animal models which include better approximations of the socio-cultural and environmental influences on drug use by humans. This might go a long way towards improving the predictive value of animal models in the testing of new drugs.

Human Models. The best known and most frequently used human model



of dependence liability is the Lexington test program involving human addicts as test subjects.[24] Hospitalized addicts who have been brought to a stable level of physical dependence on an opiate are given test doses of new drugs in place of the usual one, in order to see whether these will successfully prevent the opiate withdrawal reaction. If they do, it is assumed that they are essentially similar in their action to the opiates, and will therefore show the same liability to misuse.

Basically the same approach is used in studies with primates at Ann Arbor[25] and elsewhere, and the rationale is identical. A significant advantage in the use of humans is that they can describe the subjective effects of the drugs to the observer. No animal model has yet permitted the recognition of effects comparable to what humans experience as euphoria. The fact that a human subject can describe such an effect is therefore an advantage for anticipating the likelihood of provoking drug-oriented behavior in man.

A basic drawback in this human model, however, is that it has been developed with excessive emphasis on the opiate drugs. By definition, this model is suitable only for testing new compounds of the same pharmacological type as those used for producing the dependence in the test subjects. A little work of this type has been done with sedatives of the barbiturate and other types, but very little indeed has been done with stimulants, hallucinogens, and other drugs with a potential liability for non-medical use. Consequently the model is used almost exclusively for screening drugs which may function as substitutes for those giving rise to presently existing problems. There is no way in which it can be used to screen for possible new types of problem.

This limitation is also shown in the few studies that have been carried out with amphetamine, cannabis, and hallucinogens. The procedure has been used primarily for the study of cross-tolerance among these agents[26] and the argument is again one of analogy. If a subject is made tolerant to LSD, and he is then shown to be cross-tolerant to another drug, it is assumed that the second drug has basically the same type of action as the LSD and would presumably share the same types of risk. So far, the technique has really been used only for studying cross-tolerance among known drugs. Its purpose has therefore been primarily to clarify fundamental similarities or differences in their mechanisms of action. It could also be used for screening new drugs but again, as in the case of the

opiates, it would be suitable only for drugs of the same general type as that used to produce tolerance. The broader use of the cross-tolerance model is improbable because in some cases, such as the barbiturates and related drugs, physical dependence poses too serious a hazard to life and ethical considerations limit the extent to which the technique can be used. In other cases, such as LSD and related hallucinogens, there is no known development of physical dependence because tolerance arises through tachyphyllaxis or exhaustion of the basic mechanism by which the drug acts. With other drugs which disappear slowly from the body, such as amphetamine, it is possible that physical dependence does occur but that it disappears at almost the same rate that the drug itself is eliminated, so that the manifestations are greatly reduced in intensity.[27]

The general concept underlying this human test of drug substitution is a very narrow one which puts all the emphasis on physical dependence as the cardinal phenomenon of "addiction." This type of screening test, therefore, ignores all the cultural and social factors in the generation of drug-oriented behavior. If one were to screen MDA or LSD by this test, one would come to the false conclusion that they are unlikely to pose a serious social problem. The implication is therefore that a positive test (i.e., an ability of the new drug to prevent opiate withdrawal symptoms) is useful in predicting addiction liability, but a negative result is considerably less valuable. There are even instances in which members of the opiate or synthetic opiate-like groups have given false negative results. For example, nalorphine and detroxpropoxyphene do not substitute for a morphine on this test and yet instances of dependence on these drugs have arisen in clinical practice. It is clear that this type of screening is much too restricted in its applicability to be of general value as a prognostic index of potential drug problems.

Conclusion

It is clear that drug screening, both for therapeutic and for toxic or undesirable effects, is a process which can yield only approximate answers. Errors of both classical types are possible, and indeed probable: rejection of potentially useful drugs, and adoption of others which later prove to give rise to an unacceptable level of harm. The probability of errors of either type is related to the diversity and specificity of screening methods employed. These are in turn related to both the "state of the art" in development of methods, and the economics of product development by the pharmaceutical industry.

In the whole spectrum of screening methods, those pertaining to "addiction" or "abuse" liability are perhaps more limited than those serving any of the other major screening objectives. One important deficiency which must be overcome if substantial progress is to be made, is the excessive concentration on physical dependence on opiates, which has exerted undue influence on scientific thought in the field of non-medical use of drugs. Methods capable of screening for other types of drug problem are required, and for this purpose it is necessary to agree on the types of problem which screening techniques must simulate. In this area, there should be greater emphasis on testing drugs not only with intended therapeutic uses in mind, but also in the range of doses by the modes and patterns of non-medical use.

Another area which deserves greater attention is the screening of different pharmaceutical preparations of the same drug. In addition to screening for "abuse liability" of a given chemical, there may be considerable merit in screening for low-risk vs. high-risk *preparations* of the drug. For example, amphetamine inhalers formerly constituted a high-risk preparation because they could be easily obtained (not being intended for ingestion) and easily extracted to yield a large dose for devotees who desired it. Current experimental preparations of a naloxone-methadone combination provide an example of intended low-risk formulations, because the naloxone should prevent an illicit user from getting the desired euphoriant effect by extracting and injecting the drug. Another suggestion is the addition of a tiny amount of an emetic or laxative to oral preparations, so that doses much in excess of the prescribed range would defeat the illicit user's purpose.

Friebel[28] has stated clearly and dramatically the size of the problem facing those who must conduct screening procedures: "...the market life of a newly introduced product averaged about five years. Of the drugs at present on the market, 70% were either unknown or unavailable 15 years ago." This fact confronts the screeners with an extremely difficult task, because of the load of new developments with which they must cope. At the same time, the high turnover rate offers an excellent opportunity to eliminate undesirable or unsatisfactory drugs rapidly as replacements become available. The challenge, one hopes, will help to stimulate new developments in drug screening.

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THE DRINK, THE KILLER

by Jimmy Patsauq Naumealuk

"I'll buy the next round this time" he said
It was the third serving on the table
This was their special evening
The evening of the pay day
The men seemed to be enjoying the closeness
But was there really a closeness?
No one ever really knew

It was one of those evenings
Everyday life was the main conversation
And since their life is now going in circles
Their talks were heard many times before
They talked of the morning one wished that he just had
his morning for himself
The tired morning from the day before
One wished to just let things go for once
It was a day that came too often, too much of the same
One dreamed of other seasons, other times
As they talked, each took a cold sip
And as they talked they remembered

One spoke of happy times, the joke of life
Everyone laughed, they had known of better times
There sat what was once the laughing people
But now the happiness wasn't the same
Something had changed
And as they talked, they drank and ordered more

These were the people who had survived through another
way of life
They had fought through a culture of their own

Mr. Naumealuk is an Inuk who grew up in Resolute Bay. He is presently employed by the Government of the Northwest Territories. Reprinted with permission from *Inukshuk*, May 4, 1973.

A way of life that will never be seen again
They had fought us all the way to now
Only to be the victims
They had gambled on another way to survive
There is good in the change
But there was a killer right behind the good
It was unexpecting and took away many of us

And so the evening passed with little to say
A day that will little be remembered
For it came a little too often
They remembered living in the past
There they talked, laughed and wondered
To many of us it's painful to feel the loss
And perhaps this was what these men felt
There they drank and ordered more.

Drawing by Henry Kabestra, an Ojibway of the Shoal Lake Band, near Kenora, Ontario.

The Female Alcoholic

by Judy Fraser

The mass movement by women to redefine their place in Western civilization has been called the most significant social change to evolve from the sixties, a decade of rapid-fire attacks on a status quo so altered now

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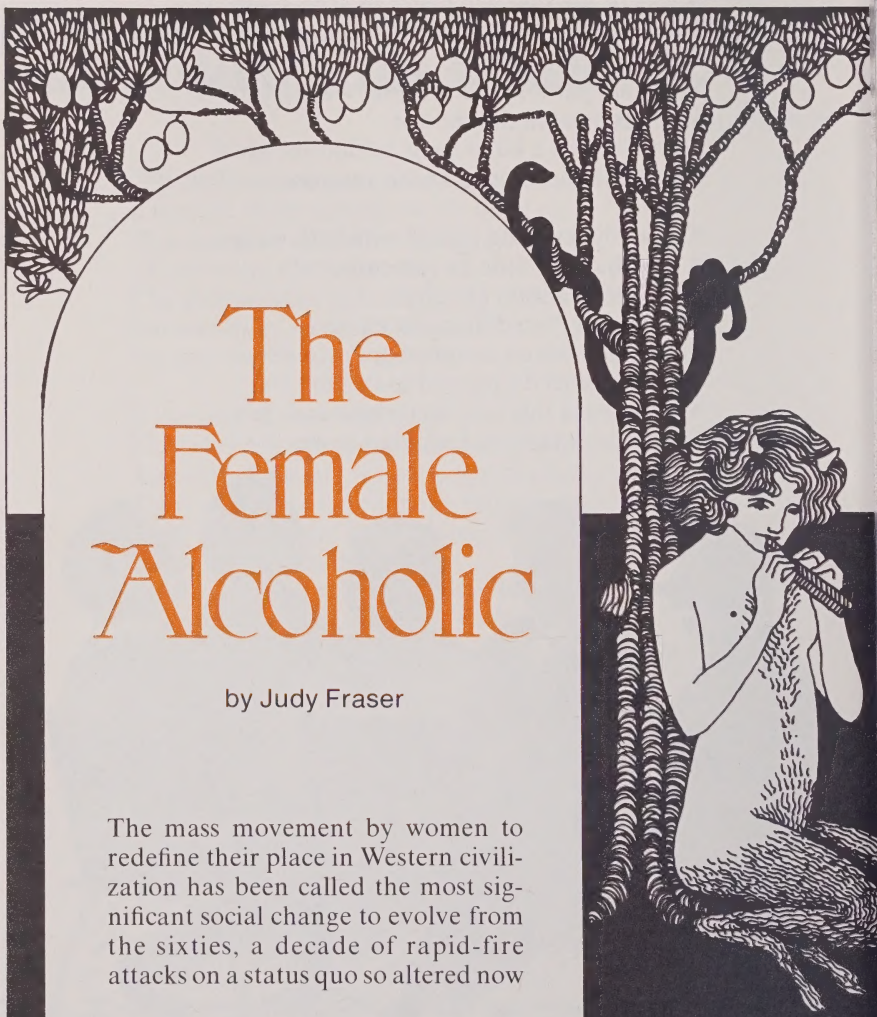
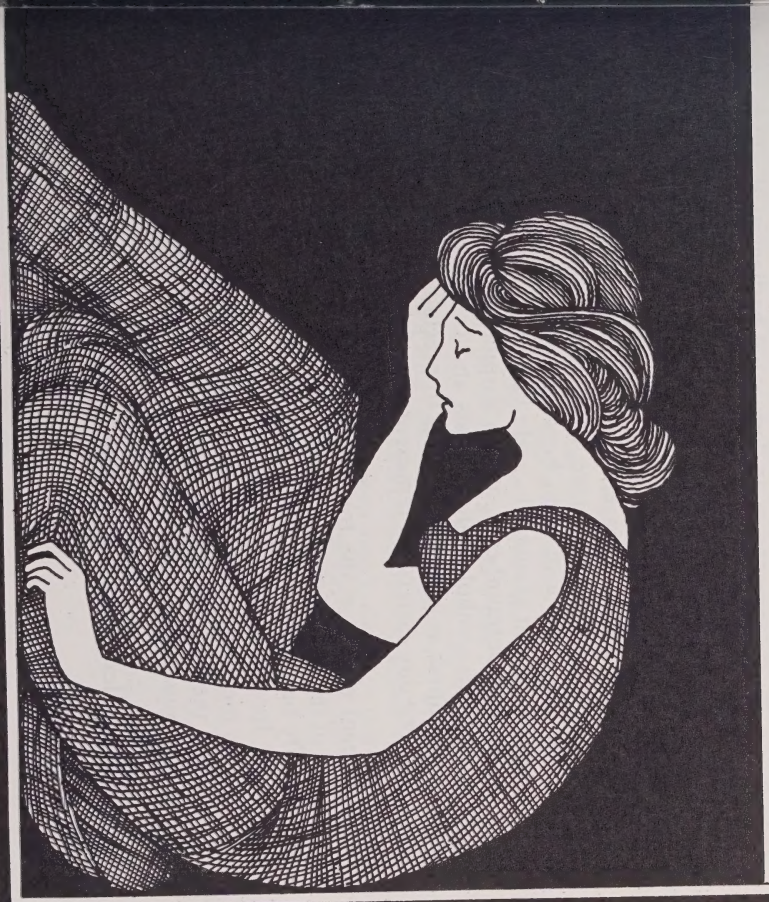
Ms. Fraser is a free-lance writer and former reporter and feature writer with *The Toronto Telegram.*



ILLUSTRATIONS BY HEATHER COO



HEATHER COOPER

that few can accurately recall it. In relinquishing her centuries-old state of grace for a modern bill of rights, today's woman faces a challenge of uncharted dimensions. The aftertaste of the revolution may be bitter; it should be sweet. For the female alcoholic, it's likely to be both.

The outstretched fist of liberation hides a tempting toast both to the freedoms she will gain and the entrapments she now confronts. By loosening the ties that bind her to the traditional wife-mother role and permitting her full self-realization without guilt, society may effectively deal with the frustration, boredom, and loneliness that have long nourished problem drinking among women. By ruling out self-sacrifice as a prerequisite for womanly happiness and encouraging the development of confidence in herself and all her abilities, society may nurture in her the kind of self-image that will not turn upon itself with liquid hate.

At the same time, with equal opportunities and no more chivalrous immunities, she may become vulnerable to the stresses and demands of full responsibility. By entering the male-dominated battleground which has yielded such ironic spoils as heavier alcoholism and early mortality, she may well be subject to the pressure to conform to the same code of behavior as her brothers.

Historically, men have been bigger drinkers. Boozing long ago achieved a questionable but real virility score. Men drink more and sooner, and alcohol often acts as a social bond between them. Only in recent years have women even been granted the right to drink in public bars without a male escort. Men outnumber women in hospital, clinic and detoxication admissions, and in alcohol-related arrests and convictions. But the gap is closing. And there is little at this point to preclude the possibility that women may one day earn equal representation among alcohol statistics.

One prominent expert in the treatment field is not entirely convinced that in spite of the lack of supportive data this dubiously desired equality hasn't already been achieved. Psychiatrist R. Gordon Bell, founder and president of Toronto's 49-bed Donwood Institute, a public alcoholism hospital, feels the ability of women to manipulate their environments to accommodate their drinking may, indeed, be the only factor impeding a statistically sound one-for-one ratio.

It's not that one less woman than man drinks dangerously, simply that

society still effectively protects so many women from a full reckoning.

Last year the Donwood admitted 625 patients, of which one-quarter were women. This 3:1 ratio is considerably lower than other similar facilities report, but Dr. Bell firmly believes it is also "a far more realistic reflection" of the full extent of alcoholism than the 6:1 average currently proffered by detoxication units. Serious drinking problems are much more prevalent among women than any figures have yet shown, says Dr. Bell, but most of it remains either unrecognized or untreated.

While one factor remains consistent in the demography of alcoholism—that women are outnumbered by men—the statistical picture of women alcoholics is largely inconclusive. It is simply not known with certainty in what dimensions she consumes, only in what numbers she has been delivered unto the keepers of figures. A recent profile of Canada's alcoholic population drawn by the Addiction Research Foundation of Ontario says that 15.7%, or one in six, of our estimated 400,000 problem drinkers is female. Admissions to hospitals, clinics, and detoxication centres generally vary between 4:1 and a Skid Row high of 8:1. Alcoholics Anonymous estimates one-quarter of its membership to be women. Meanwhile one of the country's foremost authorities sticks to the conviction that his computation of one-in-four is a vast understatement.

The margin of difference between the incidence of alcoholism among men and women is explained as the result of stronger social forces inhibiting women from excessive drinking. Women have historically worked double-duty in the preservation of social mores. They risk society's censure by bucking the prevailing code of acceptable behavior, and they risk the added disgrace of being women who faltered. As Joseph Hirsh wrote in "Women and Alcoholism": "Woman represents important social and moral symbols that are the bedrock of society. And when angels fall, they fall disturbingly far. We would rather have them in their place, which is another way of saying that they define and make our own place possible and even more comfortable."

We are a society which largely condemns heavy drinking and is only beginning to come to terms with the insidious "Double Standard." In spite of the vast and profound changes our social attitudes are undergoing, including a new tolerance for many practices weighted by sanction and taboo, the negative social value of excessive drinking remains. We have

always come down hard on drunks. We have always come down harder on drunk women.

The pressure exerts itself at two levels, but need only act at one to prevent a woman from becoming a statistic, something real to deal with. Should the existing negative forces not be sufficient to dissuade a woman from the excess consumption of alcohol, she may yet be effectively dissuaded from confronting her problem. Society may not succeed in discouraging her illness, but in discouraging instead her acknowledgment of it. Either way, we are spared another tarnished angel, and the question of the accountability of a whole body of women with hidden drinking problems remains strictly a social issue.

Our social attitudes, in fact, have created and nourished a great number of irregularities in our perceptions of the female alcoholic and our subsequent interactions with her. She appears to be so threatening a digression from the current cultural ideal that she throws us into fits and starts of confusion. We challenge her simultaneously with strong inhibitions and notable latitude. She is punished and protected, both because she is an alcoholic and because she is a woman.

Studies have shown convincingly that the woman who drinks is more highly criticized than any drinking man. Her assault on the bottle represents the breaking of a more rigid taboo, the shattering of a deeply divined image of femininity. Regardless of her social or economic status, the woman alcoholic faces greater castigation and rejection from a less tolerant society. Indeed, even the lady drunk from the most refined, well-inclined family in town still rates a shade below the roughest male habitué of Skid Row on the scale of social acceptability.

Our reluctance to deal effectively—even honestly—with the female alcoholic is supported by a multitude of social nuances. Many are designed to postpone the crucial labelling process, to delay the truth of her distress, and drive her further into her foggy underground. It's a cruel measure of our collective reluctance to humanize our concept of woman, even to save her.

A.R.F. social researcher Gus Oki has noted the deliberate action of Skid Row social agencies to exclude, or at least seriously restrict, temporary accommodations and services for deviant women drinkers. "Some contend

there are no more services than are necessary," says Oki. "And some, ignoring the evidence, believe society only creates deviance by providing accommodation for it." The reasoning is somewhat naive—that female drunkenness will be blockaded absolutely by denying women the facilities available to men—but no different from that called up to rationalize our discomfort in a variety of similar situations.

Women drunks also receive special consideration, or camouflage again, from male police officers, notes Oki. These men often appear either shaken by her loss of control or charitable in view of her lapsed feminity. Their attitude is generally pro-release and they may choose to pack her off home in a cab or notify a friend or relative instead of booking her. This favored state is indeed threatened, however, if she becomes a habitual concern.

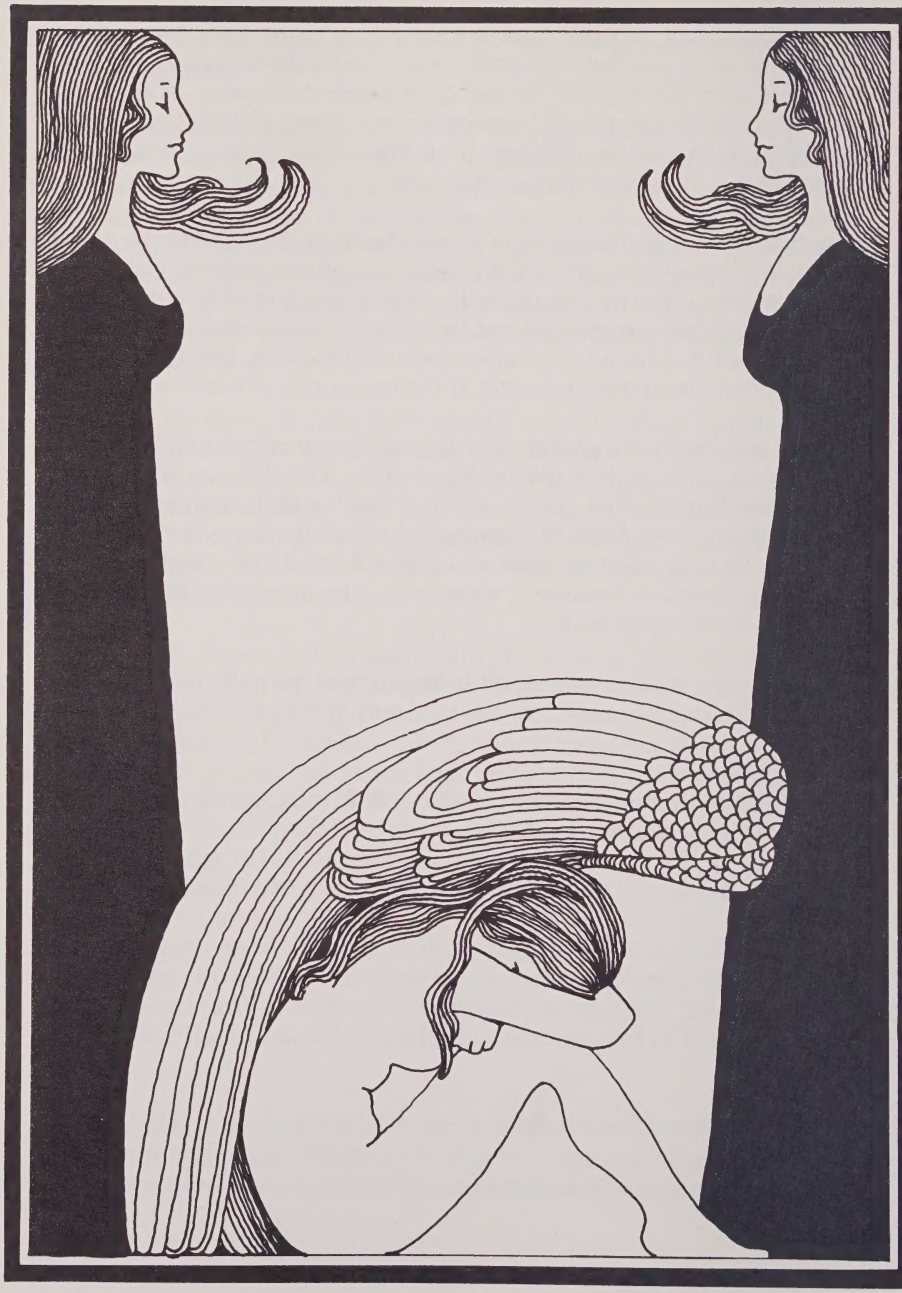
Said one seasoned police veteran of Toronto's women's court: "The men seem to pass through like it's an old routine. They just go along from getting picked up, booked, jailed, and then making their court appearance with little disruption. Women seem to fight it all the way. They all come through with a big chip on their shoulders. I don't know if it's because they were arrested or because it was a man who arrested them. Hell, we treat them all the same here."

The history of a woman's drunken behavior may partially determine the attitude police take toward her. So, too, may the age of the law officers involved.

Winnie Fraser, Acting Director of the A.R.F. detoxication unit at 410 Dundas Street West in Toronto—where five of the 19 beds are reserved for women—says that younger policemen are more tolerant of female drunks and appear more compassionate and concerned than veteran cops.

Figures on public drunkenness convictions support these observations of police protectionism. While the conviction rate of men (89%) exceeds the percentage of the alcoholic population that is male (84%), the conviction rate of women (11%) falls considerably short of the same figure for women (16%).

A woman receives differential treatment at both the arrest and disposition stage of an offense and men, clearly, take up the slack. Her position is compounded further by considerations of social status. Class, money, and



reputation are the most precious associates of the public inebriate. They regularly frustrate the alcoholic's reckoning. The higher a woman's socio-economic class, the greater society's will to protect itself from her. She is less likely to be picked up, jailed, charged, or convicted if she has any of these additional bargaining agents.

Tolerance of women alcoholics is highest on Skid Row where even abusive drinking behavior is less frowned upon. Thus, it's this woman who accounts for the vast majority of public drunkenness arrests. She is more vulnerable to police action because of all women she is both less likely and less able to hide her problem.

A crown attorney in Toronto's women's court, who rarely sees a day pass without at least one appearance on public drunkenness, notes the court's rather perfunctory demeanor: "We're generally very lenient with women. They just plead guilty and walk out. Drunks very seldom have lawyers. The court won't afford them legal aid. The judge grants a suspended sentence in most cases. Usually it's enough punishment that she's spent a night in jail drying out."

A 1971 study reported in the *Quarterly Journal of Studies on Alcohol* by U.S. sociologist Earl Rubington noted society's relative eagerness in exposing the lower class woman drinker at the expense of a much greater number of alcoholics at higher socio-economic levels. As a result of this disparate attitude, he concluded, almost 70% of the estimated 900,000 women alcoholics in the U.S. are being guarded against discovery. Other similar studies relating to the consequences of women's furtive drinking have suggested as many as nine out of 10 are undetected.

A rather vital measure of our inadequate concern for the woman alcoholic is the manner in which our understanding of her has been effectively delayed by a lack of real knowledge, research, and education. For decades studies have tended either to ignore her completely or to assume her alcoholic experience is precisely the same as a man's. A Washington University medical school psychiatrist, Dr. Marc Schuckit, conducted an extensive search and review of the literature on women alcoholics last year and uncovered only 28 studies published in the English language between 1929 and 1970. Data drawn from alcohol studies of men and applied to women is of questionable significance, stated Schuckit, and so the new interest in research and treatment for the alcoholic woman is long overdue.

There have been several unfortunate outgrowths of this situation. Most existing treatment facilities have been designed with only men, or primarily men, in mind. The training of physicians and associated personnel for dealing with the woman alcoholic has seemed to be quite inadequate. "The medical profession," said one experienced alcoholism worker, "still doesn't really have any specific expertise to deal with alcoholics. Doctors prescribe. They tend to medicate women in particular instead of treating them. Paramedics have traditionally feared and disliked alcoholic women because they haven't been properly trained to handle them. Social workers seem to want to drag them all through psychiatry just so they can be sure they're alcoholics after all. We simply don't have enough trained personnel with special skills for women."

A 1972 national survey of private practitioners conducted by researchers from the Rutgers University Center of Alcohol Studies established that 90% of the reporting doctors prescribed medication as treatment for women patients diagnosed as alcoholic. And another report notes the attempts by many physicians to protect their injured male pride by treating their alcoholic wives with little else than drug combinations which can then lead to cross-addiction.

Diane Hobbs, a professional development consultant with the A.R.F., travels widely in an effort to effect the kind of communication between her fellow nurses and their female alcoholic patients that will benefit both. "We're very concerned about our communications on a woman-to-woman basis," she remarks. "Nurses associate her with promiscuity, personal failure, being a poor wife and mother. We see ourselves in her and we're repulsed. We have to try to establish trust between us, and women aren't used to trusting each other."

Miss Hobbs, who used to operate the Leone Residence in Windsor, Ontario, a temporary home for transient women, feels that women have a great deal to gain from sharing their feelings and troubles openly. By talking about them, she says, they may discover that their fears and doubts are the same and that they have only attempted to deal with them differently. The alcoholic woman can then understand that her drinking is just one of the wrong ways to cope.

Women drink differently than men. And they drink for different reasons.

In any discriminating consideration of alcoholism, these distinctions are important.

Most women do the majority of their drinking at home and alone. This is perhaps the single most discerning factor in a comparison of the consuming behavior of men and women. It is also one of the clearest indicators of the type of environment which begets and fosters alcoholism among women. Housewives swell the ranks of female alcoholism and indeed constitute the greater proportion of heavy drinkers. They have more opportunity to drink than any other women, and in the case of the affluent social classes, they have more money to buy more and better booze, time, and recuperative aids.

An enterprising Don Mills, Ontario man, has probably met more of these women in the past few months than many career workers in the alcoholism field. He has started an independent delivery service called Dial-a-Bottle. For a minimum $2 fee, he picks up liquor from an Ontario Liquor Control Board outlet and delivers it—legally—to telephone customers. He boasts that many of his orders come from "little old ladies who don't want their neighbors to see them headed for the liquor store."

Why such women drink is a question for Dr. Bell, whose 27 years' experience in the alcoholism field make his observations both accurate and insightful: "Most women today seem to drink to relieve tremendous boredom, loneliness, and frustration. A great many women in our society have been educated to expect more out of life than merely being a good wife, mother, and homemaker. One woman can be all these things and still feel greatly unfulfilled, while for other women it's enough.

"There are so many reasons a woman deserves to be able to be more than the traditional wife-mother. Women see a fantastic range of life beyond motherhood and being a good wife. They want that life, and we at Donwood support them. We feel that a woman, as a man, needs the opportunity for personal fulfilment. It's so simple. It's common sense. Some people are partially enslaved by the definitions of what is man's and woman's role. I say dump these old ideas, they're dated!

"If there's a chance for the fulfilment of a woman's education and her identity, then the likelihood of her ever turning to a drug is reduced to begin with, and certainly reduced should later problems arise.

"Aside from this, there's been such a dramatic change in the relative stability of life's institutions in the past quarter century—there are so many broken marriages—that marriage itself has become a seedbed for planting alcohol and other drugs to alleviate boredom, frustration, and the lack of a sense of personal identity."

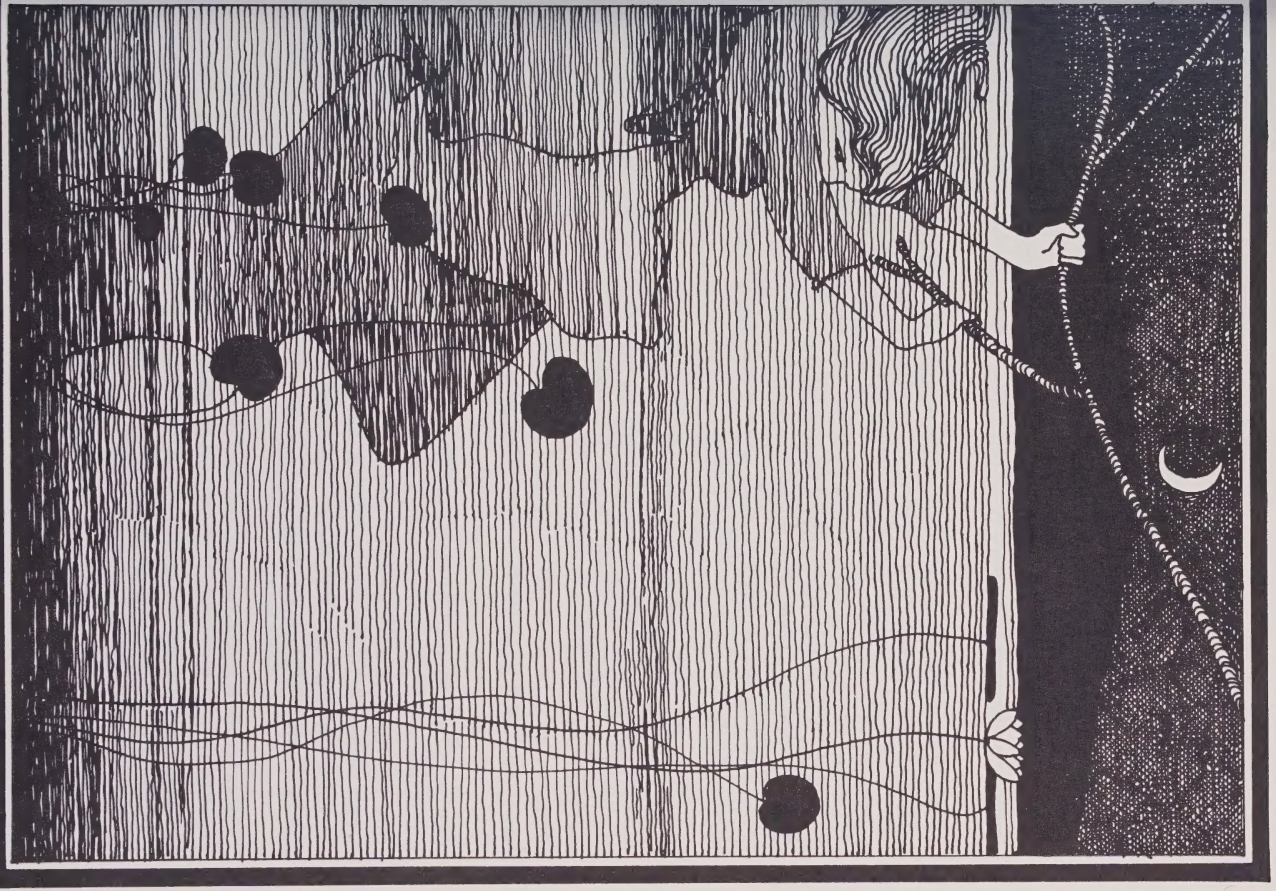
Adds his associate, Dr. George Birtch, Director of Continuing Therapy at Donwood: "We try to help her achieve a new living pattern, to regain her physical and nutritive fitness, to find more stimulation and a greater sense of security. Many women have given up interests they once greatly enjoyed. We heartily encourage them to pick them up and explore new ideas."

Toby Levinson, a Clarke Institute of Psychiatry psychologist, comments: "Women who don't like the way they are drink to alter their awareness of themselves, even temporarily. Through foggy vision, it always seems better, softer, and kinder. Some women, even after they've successfully overcome alcoholism, have told me they still prefer the world of their intoxication to their real existence. They like it better out of focus."

Few women get regularly drunk on beer; they prefer—in the beginning, at least—the more "feminine" sherries and fine wines. The beer-drunk female is nonetheless an increasingly frequent discovery now that taverns have been opened to unescorted women and the drinking age has been lowered to 18 in many constituencies. Indeed, women are drinking more openly today than at any time in the past. It is this factor, coupled with a new awareness of women in general, which has created the appearance in recent years of an upswing in alcoholism among women.

Says Winnie Fraser: "It only seems to be more of a problem today because women have been liberated to go into bars on their own. It isn't necessarily that they're drinking more, but they're drinking more out in the open. And that's not such a bad thing. The woman who is careful to drink where no one can see her is the one who troubles me."

And Toby Levinson adds: "As a matter of course, the executive or professional man in particular has much greater opportunity to drink than a woman. He has cocktails with clients over lunch, more drinks to cap the



HEATHER COOPER

deal, cocktails at home with his wife before dinner, and then perhaps a few more drinks later to relax. Women don't normally enjoy that style. But I know that at 'tea parties' these days they don't serve just tea anymore. The ladies serve drinks."

Dr. Bell offers the qualification that the hidden alcoholic isn't very likely to expose herself on such an occasion: "They're rarely the ones who get sloshed at cocktail parties. These women don't want anyone to know they drink heavily so they're very careful to avoid disclosure."

At the A.R.F. Dundas Street West detoxication centre, where 328 women were admitted during the unit's first six months, most have been classified as lower-class drunks, with a high representation from Skid Row. And while the occasion is rare when at least one female resident isn't a Skid Row type, it is not so rare anymore to find her in company with a middle-class working woman. She may be a single young professional who got too drunk in a bar to get home, or a divorced middle-aged secretary found stumbling home from an office party.

A persistent misconception is that the only women with serious drinking problems are bored losers at either end of the social scale—the down-and-out street drinkers and the leather-faced charity-chasers of the upper income brackets. For while alcoholism may well be concentrated among these women, a new curiosity and concern seems to be developing for heavy drinkers in another identifiable subgroup.

The unattached middle-aged working woman, an almost invisible and inconsiderable entity to alcohol experts at one time, is causing many to look again. Not only are her numbers increasing, as a result of reduced social pressure to marry and the availability of divorce, but apparently also her alcohol consumption. She, too, drinks at home and alone, but she lacks the cloistering of the housewife.

"These women live alone primarily," notes Toby Levinson, "either because they're single, divorced, widowed, or whatever. And I believe alcoholism is on the rise among them. It's really an explosive situation. They're alone, lonely, and have none of the supports of even alcoholic housewives in terms of husbands and children. The support of close associates is necessary. The only way the problem among these women can even be tapped is

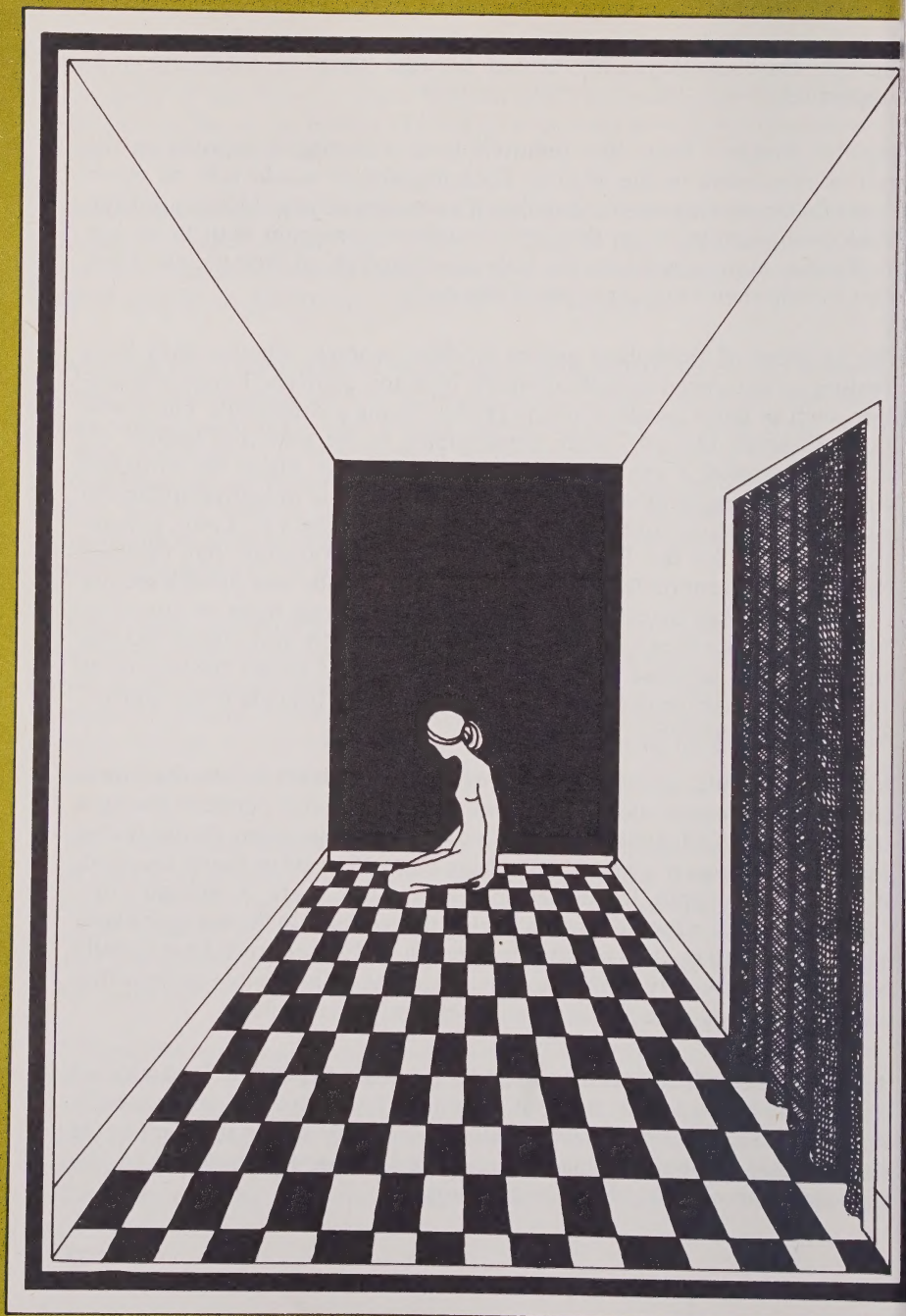
through their employment records because most of them are self-supporting."

Says Dr. Birtch: "There has definitely been a change in attitude on the part of employers in this regard. Economically, it would take so much to retrain a new employee today that it's a more realistic decision to keep an alcoholic employee on through a treatment program than to let her go. Besides, many employers are truly concerned about their people. They want to help their employees out of this rut."

The problem of alcoholism among working women, whether they have families or not, receives such attention in many quarters. Large corporations such as Bell Canada, Ontario Hydro, Eaton's, Simpson's, The Royal Bank, Imperial Oil, and some departments in the vast civil service, all of which employ a great number of women, have taken the initiative to detect drinking problems and refer their sufferers to industrial treatment projects. A "Manual for Supervisors" developed by Ann St. Louis, personnel counsellor for the Department of National Revenue, has received considerable attention from employers in both public and private sectors. The A.R.F.'s May Street Clinic, which takes referrals from co-operating businesses, sees about one woman for every 10 men in its rehabilitation program. Most of these are clerks, secretaries, and nurses committed to treatment by their respective supervisors who then become major participants in their recovery.

Women, as a rule, encounter drinking difficulties later in life than men. The average woman alcoholic begins abusing alcohol between the ages of 28 and 33. And unlike men, in whom the progression of the illness normally occurs over a period extending up to 15 years or more, the onset of symptoms is rapid, telescoped into only a few years. A woman's first hospital admission for alcoholic complications occurs on the average about the age of 40 and by then her physical health and appearance have usually deteriorated strikingly. If she escapes treatment at this point—as she often succeeds in doing—the rate of impairment only accelerates.

It has been noted that women often begin their dependence on alcohol in response to a specific stressful situation. That situation is frequently an early marriage breakdown. Statistics have shown that as many as two-thirds of alcoholic women are divorced, a rate not matched by the male segment of the alcoholic population.



Researchers have also demonstrated that the incidence of alcoholism in the immediate families of women alcoholics is often notably high, particularly among male members. A cross-section of such studies confirms that at least one-third have alcoholic fathers or brothers and in some cases as many as one-half.

The family member who appears most infrequently as a problem drinker in the histories of female alcoholics appears to be the mother. A 1971 California study of factors contributing to alcoholism suggests there is some evidence that parental drinking has its most profound effect on children of the opposite sex. A horrifying report published recently in the British medical journal *Lancet* describes a far worse legacy than alcoholism-by-example for the newborn infants of chronic alcoholic mothers. The study, carried out at the University of Washington School of Medicine by a pediatric team purports to establish the first real association between maternal alcoholism and multiple physical deformities in their offspring.

Women alcoholics have consistently demonstrated a high incidence of psychological disorders. Research has indicated that they are frequently confused and poorly adjusted to their roles. An extensive study concluded in 1971 at the Institute of Human Development at Berkeley, California showed that women with serious drinking problems often develop a full system of inadequate coping devices. They are classified as vulnerable, dependent, self-defeating, and distrustful.

If these women are vulnerable to anything, they are wide open to some terrible and deep personal losses as a result of their illness. It is a common belief that for every 10 wives who see an alcoholic husband through, only one husband remains with an alcoholic wife.

"Women are generally far more dependent on the institution of marriage," notes Mrs. Levinson. "They're infinitely more vulnerable than their husbands. We know very little about why some spouses stay and see it out, but I'm inclined to think it is an individual reflection of one's commitment to marriage, to the relationship, to the personalities involved, and to the good feelings that existed before alcohol came into the picture."

Beyond losing her husband, the alcoholic mother risks not only alienating her children, but losing them too. Winnie Fraser tells of a young woman who only three years ago, at the age of 23, was quite happily married

and the mother of three infants. Today she's a hooker and street drinker. She's been arrested several times by the police and admitted repeatedly to the A.R.F. detoxication unit to dry out. She began drinking when she discovered her caretaker husband seducing a high school student on the job, and since then the Children's Aid Society has taken two of her children and her mother cares for the third.

If women succeed as a sex in getting themselves together in the years ahead, it's conceivable that both our conception of womanhood and our understanding of her lapse into alcohol dependence will undergo profound changes. What problems the revolution in women's thinking might create among experts in the alcoholism field, who have yet to deal with her in terms of current attitudes, is unknown. But it's clear that by recognizing her potential for developing a strong individual self-image, they will be at an immediate advantage.

The Addiction Research Foundation, established in 1949, is financed by annual provincial grants. Representatives from the business and professional community, appointed by the Lieutenant-Governor in Council, establish all Foundation policies. The Foundation's Professional Advisory Board is responsible for advising on scientific development and professional programs.

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addictions

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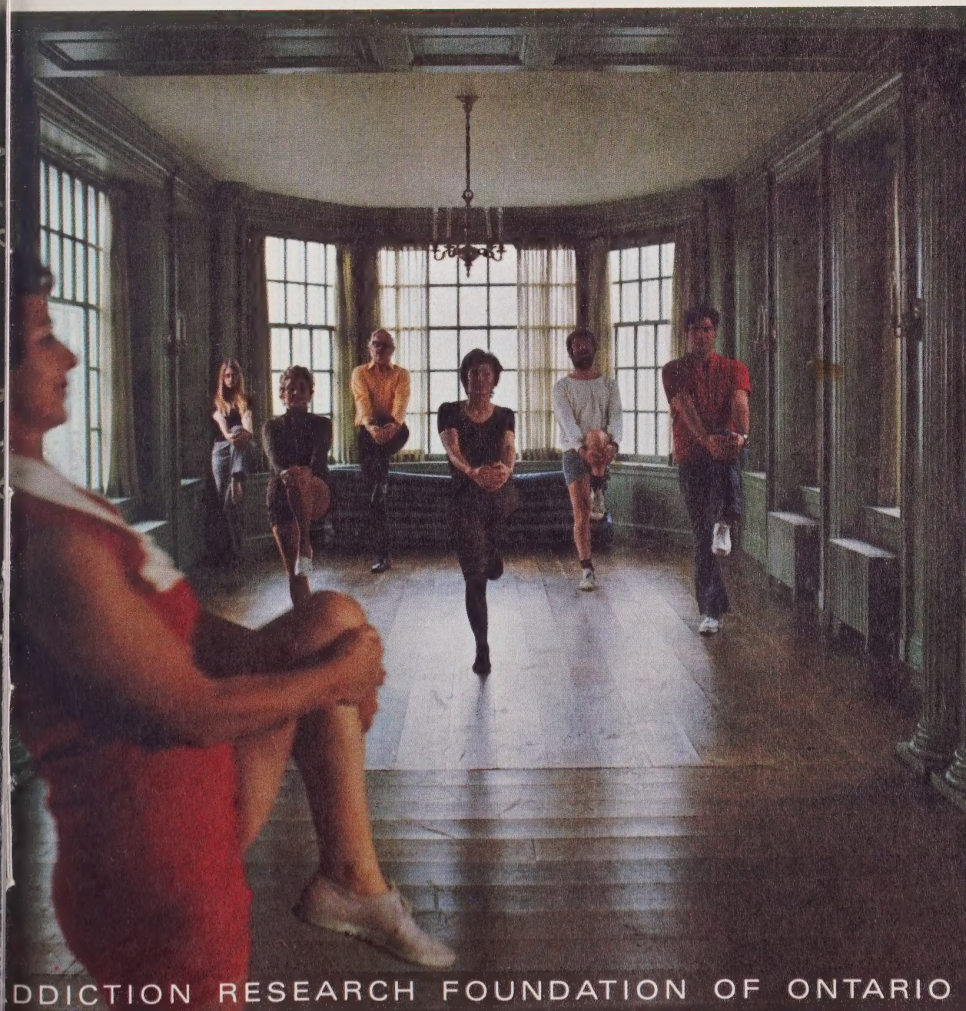

DDICTION RESEARCH FOUNDATION OF ONTARIO

Once upon a time, in the early days of drug education, it was necessary to remind people that "Alcohol is a drug too." This effort to establish perspectives on the chemical age was not always successful as panic and anxiety tended to focus attention on what were felt to be *real* drugs.

Research in the alcohol field continued alongside the perhaps more newsworthy investigations into the drug phenomenon. Data emerging during the past year show that the abuse of alcohol remains our biggest drug problem. Judging by the renewed interest in alcohol education, treatment and prevention programs, past rhetoric has been endorsed by present evidence.

Nothing fails like success. As resistance to including alcohol in the spectrum of concern is overcome, the price of a vital balance of awareness and understanding may be paid.

The pendulum swing back to alcohol can give birth to a new myth and a social deceit. One popular belief is that kids are switching from the new drugs to the old one. The strange comfort and reassurance this is supposed to offer is based on two assumptions. One is that the use of alcohol provides less cause for concern. The other assumption is that there is, in fact, a switch.

The first assumption must be tested against the mass of information about the dangers of alcohol consumption. As for the second, there are continued reports of *stacking* drugs, not just switching. Some kids are drinking at the beginning of an evening's activities and winding up the night with one or another of the newer drugs.

Programs focusing on substances as such may lead inevitably to chemically-specific conclusions. We should be looking into chemo-behavior in general as well as the prevalence and incidence of any single drug of choice.

L.A.P.

editorial

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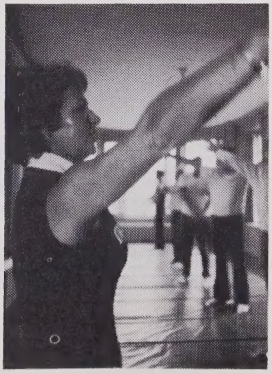

Fitness program at Donwood's day clinic

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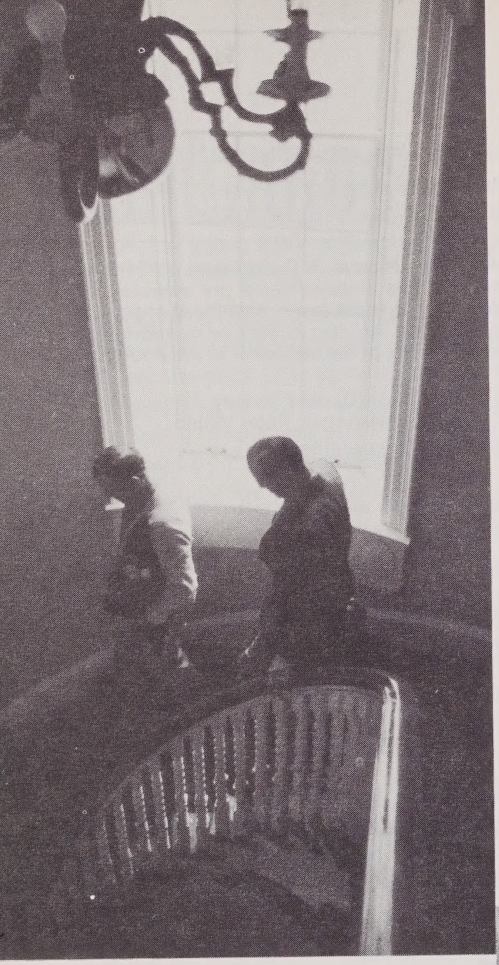

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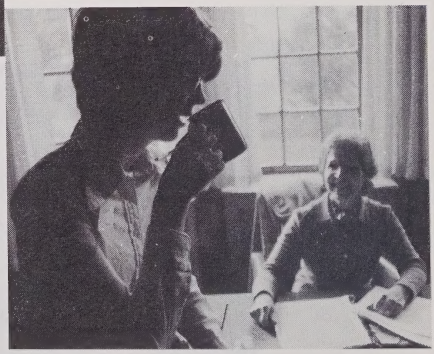

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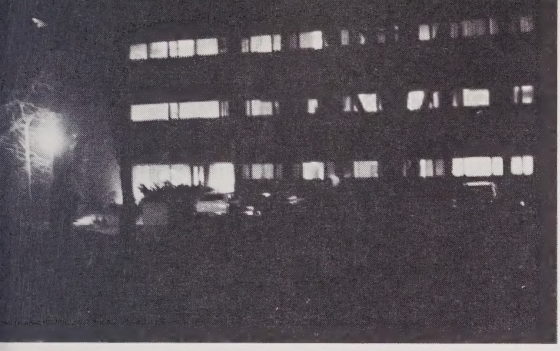

NWOOD

by Judy Fraser

"We know—we don't have to kid ourselves—*we know* that if someone comes through this door, the odds are strongly in favor of our having a real positive input into his health. The whole staff feels this, and the patients feel it, even their families and employers do. They know we expect to succeed."

It is the power of such positive thinking that has made Dr. Gordon R. Bell, and the Donwood Institute with which his name has become synonomous, a life line for those seeking escape from alcohol and drug dependence at the 50-bed addictions hospital in Toronto.

What fosters Dr. Bell's optimism is not only his sense of mission, but

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Ms. Fraser is a freelance writer and former reporter and feature writer with *The Toronto Telegram.*

the outcome of continuing research which indicates that the Donwood's triple-effort, long-term treatment program is yielding decidedly positive results.

"We've done seven studies here now," he remarks. "The Addiction Research Foundation sponsored two and we've done five. They have proved we should expect to win with most of our patients, that there's no basis for pessimism at the prospect of interrupting a dependence pattern.

"I'm really only interested in whether we're batting better than 50-50 or not. Because above it, you expect to win, and your attitude implies that. Below it, you expect to lose. We're given more and more to the expectation of success."

Clarke Institute of Psychiatry psychologist Toby Levinson, a consultant to the Donwood, will soon conclude a five-year follow-up of 154 alcoholic patients admitted to the three-phase treatment program during the first four months of 1969. In her first review of this group 12-18 months after admission, a study sponsored by the American Association Against Addiction, Mrs. Levinson found 67% had experienced at least "moderate" improvement. Of those, 51% could be classified as "significantly improved or recovered." After four years, the picture was even better, with 70% registering positive changes.

For Dr. Bell, of course, it means the caring community works. It also means that while some people believe only misfortune comes in threes, for Dr. Bell and the Donwood, three may well be a lucky number. The figure appears with unusual frequency in an analysis of the hospital's treatment program.

It's merely indicative that Bell's theory of the progression of chemical dependence is based on three "panels of experience." Each panel describes experience on three levels—physical, mental and social. The resulting nine-part chart, which forms the theoretical basis for treatment at the Donwood is, of course, a multiple—3 x 3.

The plan was conceived, almost as an expediency, at the early Bell clinic, the nine-bed facility operated privately by Dr. Bell for 20 years before it gave way in 1967 to the public Donwood Institute. "In its actual execution in those early days," he recalls, "the program had to be determined entirely

by the people available. There were less than a dozen of us, and while we all had quite a bit of experience, we were wearing all the hats at one time. It was roughly for our own guidelines that the program was broken into a period of initial health care in which we would get the patient into shape so we could work with him and a second period in which we could set the stage for whatever changes we thought he might institute in his life. And then, in what has become phase III, a time when we would work closely with him while he did that."

The opportunity to flesh out the program and seriously test its applicability came when Dr. Bell and his staff moved into the Donwood seven years ago. As a public hospital, it qualified for support under Ontario's hospital and medical insurance plans, and the decision to establish phases I and II within a 28-day period of residence resulted from that. Phase III was set for at least one year, optimistically two, beyond hospitalization. A commitment to treatment for a full year was required of everyone admitted.

Each applicant to the Donwood must undergo a pre-admission interview or provide a referral from his own physician. Patients are rarely rejected at this point, and certainly not for any lack of initial motivation. But it is the first screen in a series which may identify a candidate as unsuitable mentally or physically for this particular program. Actual admission generally follows 10 days to two weeks later.

"Most patients who come here are under great pressure from their wives and families," says superintendent of nurses, Mary Epp. "They really come to satisfy them at first. Some decide to do it for themselves, of course, but I think they'd be in the minority. Most who do get in, no matter what their original motivation, will actually see it through, though, at least until the hospital program is over."

Phase I is designated as a period of examination and orientation. Dr. Bell calls it "a job for physicians and nurses." As a rule, it lasts one week but can be extended in individual cases.

Admission is celebrated with a Breathalyzer test to determine the extent of intoxication. This is followed by a thorough physical examination by the attending physician which may, in the case of an inebriate, be delayed slightly until he has either sobered up or recovered sufficiently from his withdrawal reaction.

"The majority of our patients are not usually feeling very well when they're admitted," says Mrs. Epp. "Many are withdrawing from either alcohol or tranquillizers, or both. Certainly most need detoxication."

The physical examination is thorough. It is designed to assess the damage suffered by the patient as a result of intoxication and malnutrition and to uncover what other disorders—pneumonia, heart disease, cancer, diabetes, etc.—his problem commonly hides. If a serious health complication requiring special medical attention and treatment is discovered during this examination, the patient will be transferred to a nearby general hospital and returned later to resume the Donwood treatment program.

"We don't really see that many patients with a condition significant enough to necessitate this type of clinical attention," remarks Dr. Bell. "If we admit someone with a damaged liver, it may simply mean that all we can hope to do for him is to interrupt the intake of whatever is harming him and then provide both a nutritional and activity regime commensurate with

the degree of damage. If we get someone close to liver failure, mind you, it's better for him to be in a hospital with access to the whole range of diagnostic and therapeutic techniques. We don't have them; we don't pretend to have them."

Mrs. Epp, who has worked closely with Dr. Bell since the days of the Bell Clinic, describes the mood of many patients during phase I as "euphoric." It's a combination of their relief at finally being in tow and out of the range of outside pressures and finding they're "not the only ones, not alone."

The patients also undergo psychological testing during this phase, with a particular view to identifying the mentally ill or brain-damaged who may be unable to benefit from treatment at the Donwood. If a patient's condition indicates it, he may receive further specialized tests and a psychiatric interview.

The therapist who will lead the group therapy sessions in phase II gathers a detailed social history of each patient during the orientation period. It is expected to profile the patient's life experiences from childhood including such things as his family, education and employment history, personality development and interpersonal relations. The Donwood staff applies equal consideration to a patient's physical, mental and social states from its investigation of his acquired dependence through treatment to recovery.

"We have to know as much as possible about the patient's overall status in order to weigh our treatment results against our impression of his resources to cope with his problems," says Dr. Bell.

During this period of examination, when patients are reintroduced to a balanced program of sleeping and eating, the superintendent of nurses performs an ancillary ice-breaking role. She conducts informal daily get-togethers for the patient group in which they are encouraged to seek answers to their questions, share their apprehensions and overcome their strangeness. "They start to feel a little more relaxed here, begin to lose some of their anxiety, and become familiar with the hospital," notes Mrs. Epp. "They begin to talk to one another and to us."

The clinical staff meets in conference toward the conclusion of phase I

to co-ordinate the findings of the examination team, assess the reversibility of existing physical, psychological and social damage, and evaluate individual treatment needs. Recommendations may be made here on the suitability of one patient for group therapy, the ability of another to benefit from instruction or the need of a third for individual counselling.

"The assessment helps us understand the patient better," says Mrs. Epp. But primarily it helps us to decide whether he is ready to go on to the next phase of treatment or whether, for some reason, he would be better off to remain longer in phase I." It is not uncommon, in fact, for patients to be recycled through one, and sometimes several, phases of the three-stage Donwood program. Those experiencing withdrawal, particularly from tranquillizers, are often held back until their mental acuity is restored.

"The people who come in here in a pretty bemused state are motivated not because they can understand so much of the instruction initially," comments Dr. Bell. "They're simply too stunned. But they are aware of being in a caring environment. They're motivated by their appreciation that their problems are taken as important."

Phase II is defined as a period of instruction and therapy. It is a highly-structured, three-week program designed to deepen the patient's insight into himself and his dependency, and to intensify his motivation for recovery.

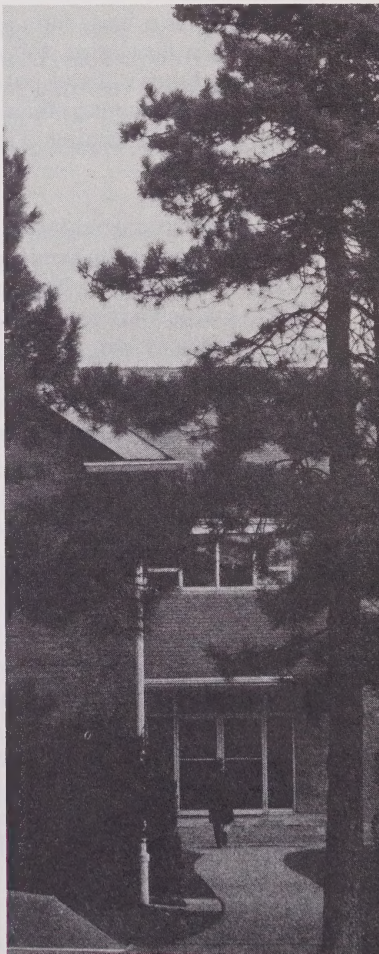
"With this part of the program, I think we're getting a clearer idea of what we're really trying to do here, what the whole thing is actually about—our objectives," says Dr. Bell. "One of those objectives is to inactivate dependence, and that will take a year or more, I believe, regardless of the type of chemical substance a patient happens to be over-involved with. A second is to achieve significant or optimal repair of the secondary related damage. The third goal is to substitute a comprehensive new pattern of health for the patient's habituation to alcohol or drugs."

The Donwood's objectives are sought through the group therapy experience, an extensive series of films, videotapes, lectures and discussions, regular physical health care, and in some cases, individual counselling. The patients' will to succeed is thought to evolve from the positive responses elicited by a new understanding and awareness of a life free of uncontrolled dependence.

There are generally five patient groups at various stages of phase II treatment at any one time—three enrolled as in-patients and another two receiving treatment through the hospital's day clinic which was opened a year ago for patients who don't need round-the-clock treatment. During this phase, all patients with alcohol dependence are receiving regular doses of the protective drugs *Antabuse* or *Temposil.*

Phase II begins with the first of at least 10 educational presentations which attempt to interpret such things as the nature of addiction, the physical, psychological and social factors which predispose individuals to alcoho-

Day clinic director Joe Dietrich with Donwood founder Dr. Gordon Bell.



Courses for patients' families are held in this church building, down the road from the Institute.

lism, the Donwood concept of treatment and the benefits of a positive approach to health.

"In the early days the didactic instruction, for what it was worth, was me in action at the blackboard once a day," recalls Dr. Bell. "Now we have videotapes and they permit both stability and flexibility for the design and execution of long-term therapy programs. Once you decide on long-term therapy of any kind, you should have some kind of blueprint to ensure that you continue working toward the same objectives.

"Videotapes stabilize the course of instruction. They stabilize the input of all classes of personnel—psychologists, nurses, physicians and so on. They provide a basis for a great number of people and if properly taught, with group discussion following, they become the first step toward the accomplishment of the patients' long-term objectives. Without this, you don't let the patients or their concerned associates acquire the same starting point in understanding. This is where you come together in a common language."

The same basic orientation material has been condensed into a 3½-day course offered to the families, friends and employers of Donwood patients in the third week of hospital residence. It is supplemented by "Family Day" to which patients invite close associates to congregate at the hospital for open discussion.

Dr. Bell describes how the plan developed: "I was asked to speak to some Al-Anon people about three years ago and they brought up something I'd been concerned about for quite awhile. They asked, 'Why don't you give us the chance to get the same instruction as the patients? You are leaving us behind; when they come home, we can't talk to them about it.'

"In the spring of '71 we held our first series of Saturday morning seminars for former patients, a sort of general review I invited them to attend. The response was far better than we'd ever expected. There were so many people here they filled the room. We taped it, and all the discussion that followed. Then we edited that. It became our correspondence course.

"We got going on the videotape scheme for the 'mini' course in 1972 and last fall we made a new set of tapes for a revised program. We had to move out of the Donwood for this course, and we found space just down the road at the Northlea United Church.

"More and more we're finding the families of patients are coming from great distances to take part. They'll often take the high school children out of classes and bring them to Toronto for the week. There is so much more involvement today, and through it, more an expectation of success. The problem drinker's family is often so relieved just to find that there are understandable explanations for the phenomenon they've been living with."

During the first day of phase II, patients are also introduced to an initial two-hour group therapy session. They will attend regular group sessions two hours a day, three days a week, during their remaining residence at the Donwood.

On the first Thursday of phase II, patients face a marathon eight-hour session interrupted only for lunch. Psychologist and research director John McLachlan calls it a "critical" point in breaking through the alcoholic's barriers to real communication. He characterizes the group experience as "client-centred" and "reconstructive," a place to restore self-confidence and initiate improvements.

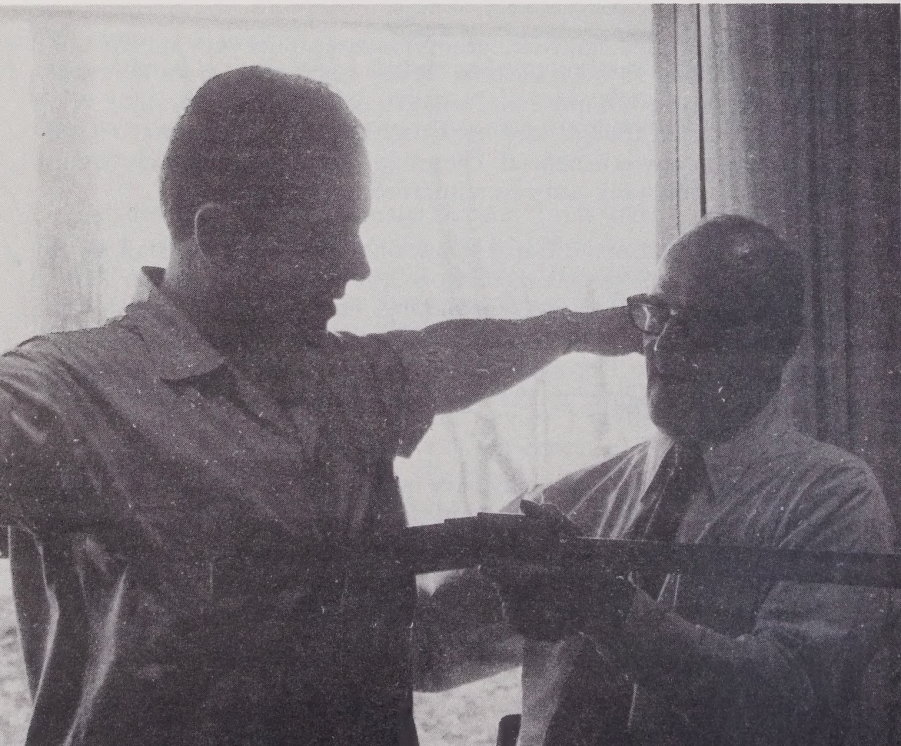
"Most patients, I think, approach group therapy at first with anticipation and apprehension," says McLachlan. "They hear stories from the other patients and they're not quite sure what to believe. It's generally a very positive experience, though, and most patients who've been asked seem to rate group therapy as beneficial. The group identification actually begins building in the first week and gets reinforced through phase II."

The active groups are orchestrated by one or two members of a staff which includes four psychologists, a social worker, family counsellor, two addiction counsellors and two nurses-in-training. Therapist Violet Head, who co-ordinates the therapy staff, says it's not uncommon for the group to be joined by another Donwood employee whose work with patients in phase III of the program might benefit from better understanding the group experience.

The therapists, although they may have individually varied ways of doing so, strive to achieve several important developments through the group exercise. In minimizing the alcoholic's defensiveness, they get him talking—perhaps for the first time, about how he really feels—listening—for the first time, perhaps, actually hearing others' cries for help—and sharing—thereby realizing that the burden of disappointment is lighter when borne on many shoulders.

At the same time, the therapist attempts to impart several other essential elements of successful treatment: that recovery entails a shift in dependence from chemicals to people; that it necessitates the interruption of one way of life and preparation for a healthier existence; and that freedom from uncontrolled dependence offers alternatives not available to the addicted.

Psychodrama is one effective method which Donwood therapists draw upon for group therapy. John McLachlan also uses hypnosis, although he tenders a "cautious" view of the practice. He feels it produces benefits, particularly for the tension-bound, because it presupposes intense involvement with patients and encourages them to attain self-control. "When I think of the loss of self-control, which is a big factor in alcohol dependence, I think of the loss of control over other things," notes McLachlan. "To demonstrate that people can control their actions—and ironically, by 'letting go'—is important to patients who fear they have lost that capacity."



Group therapy may be supplemented by other forms of individual or family counselling during phase II, but according to Violet Head it's not the rule. It's common, however, for the spouses of patients at this stage to be interviewed separately.

In phase II, patients continue the physical health improvement scheme initiated during their first week in hospital. The physiotherapy staff instructs and encourages residents to implement newly-learned relaxation techniques and take part in fitness exercises. They also provide therapeutic skills for specific problems. And throughout the 28-day hospitalization period, Donwood patients are urged to socialize at informal evening programs. They are also free to investigate Alcoholics Anonymous which meets regularly at the Institute.

Individual progress is reviewed in detail again toward the end of phase II at a second staff conference. This assessment yields a plan for each patient's recovery following discharge and includes specific recommendations for its achievement. Interviews and introductions to phase III staff members during the hospital program facilitate the transition from phase II to phase III and the related shift in care from the clinical to the community team.

Phase III is described as a period of continuing therapy. It is generally one year long but often more. The focus of the first four-month segment is addiction control; from the fifth through the eighth month, attention is concentrated on the psychological and social problems encountered during recovery; and the final four months are spent on the development of new interests.

Every patient leaves the Donwood with a wide-ranging health plan outlining a highly personalized new pattern for his physical, psychological and social adjustment to a chemical-free life. It is a profile of individual needs for sleep, daily exercise, nutrition and relaxation. Specific proposals are made governing the way he plans his time, the changes he might seek in relationships with both intimates and the community, the interests he might develop or re-discover to fill out his life, and the steps he might take to improve his employment status. Says Dr. George Birtch, the clergyman who is director of continuing therapy at the Donwood: "We stay with him through this period of adaptation, through the time it takes to inactivate his psychological dependence, through the whole business of habit-changing."

sical improvement scheme
tinues throughout hospital stay

The most difficult adjustment the recovering alcoholic faces, says Birtch, is "becoming a non-drinking person in a drinking society. For some people it's even harder, depending on the kind of occupation and type of social life they're accustomed to. But he has to adjust to living without it, and particularly to handling crises without chemical support. In the past he has always anesthetized himself when situations demanded that he face them. He would never feel anything. Now he must. He has to adjust to vastly changed habit patterns."

The role of the Donwood during the continuing therapy phase is primarily one of support, and the dominant figure in this effort is called a "clinical secretary." She provides the constancy, the communication and the friendly care which takes the patient through a year of reconstruction. She becomes acquainted with individual patients during the early stages of treatment and, following their discharge, she effectively personifies the Institute's continuing interest and concern.

The Donwood's clinical secretaries number about three dozen. They are housewives from the community who are paid a nominal sum for their semi-volunteer work with patients in phase III. And there is no one at the Donwood who doesn't heap upon them laurels of praise when describing their dedication.

They maintain weekly communication with every patient by letter, telephone or personal visit. They know the detailed health plan of every patient in their care and do all they can to encourage patients to seek desired changes. They facilitate referrals to the Institute's clinical staff—physicians, counsellors, psychiatrist, physiotherapist, etc.—when patients need additional support. And two clinical secretaries supervise each group's activities during the second segment of phase III treatment.

Dr. Bell says the concept evolved shortly after the 1967 move into Donwood when he realized that in order to maintain the kind and quantity of aftercare patients received at the private clinic, he needed more staff. Nurses and doctors didn't have the time and, besides, their clinical skills weren't necessary. "All that was really required," he says, "was a genuine concern for these people and a hopeful approach to their rehabilitation. The job is to keep in touch with the patients and maintain a friendly, non-critical relationship. They're not even to try to be nurses or psychologists." The first clinical secretary is still with the program; she was the only person

Dr. Bell ever had to ask, and the Donwood has more candidates than it can use.

All patients under treatment in phase III are grouped according to the month they are discharged from hospital, and encouraged to attend weekly meetings held at Donwood. For the first part of the year a nurse-counsellor conducts sessions which deal mainly with the clinical aspects of their adjustment to the non-chemical life. She is ready to intercept in the event of a relapse or emotional crisis such as depression.

"In every group there are some who just disappear at this point," says Dr. Birtch. "But for the most part group attendance runs at almost 100%. After a time it seems to level off at about 60-65% and these people continue to show regularly." The clinical secretary will often spend months tracking down reluctant patients, he notes, and even succeed in getting through now and then.

Finally, the latter segment of continuing therapy is supervised by several volunteer Donwood alumni whose own recovery from alcoholism or drug dependence provides both a successful example and valuable insight into that accomplishment.

Dr. Bell is both philosophical and analytical about the Donwood treatment program. "We know we have a significant effect on improving the health of most people who come here, but I'm not satisfied. I think we can do a lot better. I mean we're really still just groping, finding our way. As we continue to improve our ability to assess our patients' resources as well as clearly identify the type and severity of their dependence and the type and severity of their secondary and related problems we will do better and succeed with patients we aren't succeeding with now.

"I think we tend to take for granted that the right way to treat the patient is the one we are used to. New information and new insights into the field of addictions are coming in all the time. It would be wrong—indeed dangerous—to assume that we have the final answer, that there is nothing more to learn.

by Arthur Falek and Stanley Einstein

GENETICS & DRUG ABUSE—

a primer for workers in the field

In recent years the non-medical abuse of drugs reached epidemic proportions among persons in all sectors of society in many countries throughout the world. One consequence of the increasing tide of drug abuse has been the redirection of the work load of law enforcement agencies toward

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prevention based on programs of education and punishment. Furthermore, many new law, medical, and social agencies have been organized to deal with the protection, treatment, and educational aspects of this multifaceted problem.

In addition to studies concerned about the mental and physical health of individuals who abuse drugs, there have been investigations about the potential of these drugs to produce damage to genetic material transmissible to the offspring. The new drug programs have required the employment of professional and lay workers with varied backgrounds of specialties, many of whom have had little training in genetics. It is the purpose of this paper to attempt a concise review of the current status of the genetic aspects of drug abuse. This report will also include some basic genetic concepts and terminology important to an understanding of our present state of knowledge about genetic damage and drug abuse.

From the geneticist's point of view the significance of any genetic alteration is in its harmful effects on future generations. These alterations are the result of changes in genes themselves or rearrangement of the chromosomes which house the genetic material.

The DNA Chain

Chromosomes are the darkly staining bodies in the nuclei of cells in which the genetic material is contained. They are made up of a protein outer coat and a deoxyribonucleic acid (DNA) inner core. Present day knowledge[1] indicates that most genetic information is stored in the DNA, and that genetically significant parts of the DNA are the nucleotides which make up the four organic bases. In structure, DNA is composed of two nucleotide chains running parallel to one another in a regularly twisted helical (ladder) formation such that one of the two pairs of bases (adenine-thymine or guanine-cytosine) form the rungs, while the sugar (deoxyribose) and the phosphate components compose the sides of the ladder. These four, paired bases make up the four-letter alphabet (A-T, C-G) which is the basis for transmission of genetic information. The arrangement of these four, paired bases in relationship to one another along one or the other side of the ladder rungs constitutes the code of genetic information which is the template for structuring the proteins manufactured by the body.

Proteins, as you may know, make up an indispensable portion of the

structural components of all cells and tissues. In addition, proteins serve as catalysts to initiate biological activities without which none of the complex processes of living material could occur. Such processes include digestion, excretion, movement, respiration and all the other functions important for growth, development, genetic continuity, and reproduction.

Starting at one end of the DNA chain, the building blocks for the particular proteins called amino acids are determined by a triplet of the four bases. There are 20 amino acids, and the variety of combinations and length of the chains determine the composition of a particular protein. Specialists in the field of molecular biology have found that a rearrangement of even a portion of one triplet in the chain will result in a variation in the amino acid composition determined according to the usual base sequence. This alteration will in turn produce a change in protein structure which is reflected in its functioning. One example is that the change of the base in the sixth amino acid position of the 196 amino acids which make up one of the four hemoglobin chains is the basis for sickle cell hemoglobin.

Because the DNA is located in the chromosomes, an alteration in chromosome structure results in an alteration in the sequence of the genetic code. When a cell divides in mitosis to form daughter body cells, or in meiosis to form germ cells, exact replication is essential. Any alteration will affect the new generation of DNA bases, and an altered code will result in transmission of changes which will be reflected in the translation into protein structure. When the DNA code is altered this change in genetic material is known as a mutation. At the clinical level, such a genetic change may result in an altered phenotype which is the observable change or changes produced by environmental interaction with the new translation of the altered genetic code.

Mutations and Aberrations

Gene mutations can, and should, be distinguished from changes produced by visible alterations in the chromosomes. Chromosomal aberrations are different from gene mutations. Most frequently, formal and structural changes or biochemical alterations in the organism are based on gene mutations without any visible change in the chromosome number or structure.

A few well-known examples of gene-controlled normal variants in man include skin color, eye color, and height. Several, which produce abnormal

alternatives include: the hemoglobin abnormality (sickle cell anemia) mentioned previously; the neurobiochemical disorder of infantile amaurotic idiocy; the excess amino acid mental retardation defect called phenylketonuria, and the collagen defect marked by fragile bones with resulting fractures called osteogenesis imperfecta.

Gene mutations based on a change of structure within the molecules of DNA may be a consequence of specific physical or chemical agents which significantly increase the rates of heritable change in the genetic material. These physical or chemical agents are known as mutagens. Mutagenic effects have been demonstrated as a result of ionizing radiations, ultraviolet rays, and such chemicals as mitomycin C, nitrogen mustard, and carbon tetrachloride.

If the mutational event affects only somatic (body) cells, then concern is for the individual himself, but is of little significance for his offspring and future generations. When there is alteration of hereditary material in the germ cells, then there is concern regarding the heritable potential of the mutagen. If the alteration in genetic material results in the inability of the cell which forms the sperm or egg to complete the necessary cell divisions (meiosis) or in the destruction of the zygote (the cell which results from the fusion of the egg and sperm at fertilization) soon after conception, such damage is of little consequence from both an individual and population point of view. This is so for the individuals involved since they are often unaware of the situation, and therefore not emotionally affected by the loss. From a population genetics point of view, this type of loss is also of little importance since the altered genetic material is not passed on to offspring who have any prospect of becoming reproductive.

Lethal and Mild Mutations

If the individual is born but dies in infancy or early childhood, the gene mutation is said to be lethal. That is, individuals with the variant genetic material do not survive to reproductive age, and will therefore not pass on the new mutation. The gene is sublethal if some individuals with the mutation survive and are able to reproduce. It should be noted that while the emotional impact on the family will be different according to length of survival, the removal of a mutant gene by inability in conception, early spontaneous abortion, stillbirth, infant death, or death in early childhood are all indications of genetic death.

In fact, the great majority of mutations have been found to be sufficiently

harmful to result in genetic death. If the individual survives birth, the effects include severe physical abnormalities. Severe congenital malformations known to be dominantly inherited include such limited skeletal abnormalities as lobster claw and extra digits, several generalized skeletal anomalies, eye defects and facial disorders. Among those which are recessively inherited, and therefore manifested only when mutant genes are at the same locus on homologous chromosomes are eye disorders such as micropthalmia and anopthalmia, the mucopolysaccharidoses like Hurler and Sanfilippo syndromes, infantile polycystic kidney, and skeletal defects including microcephaly and hydrocephaly. Several of the malformations transmitted as sex-linked recessive traits include the mucopolysaccharide disorder Hunter's syndrome, imperforate anus, and some forms of hydrocephaly. One sex-linked dominant disorder is considered to be vitamin D resistant rickets.

In addition to genes which produce major defects, there are those which produce mild effects[2] and cause only a slight decrease in survival and fertility in each generation. These mutations remain hidden in the population for many generations before they are phenotypically expressed. These recessively transmitted mutations are only expressed when the gene is inherited by the individual from both parents.

The evidence from Drosophila (fruit fly) studies is that most recessive mutants are not completely recessive, but cause some impairment even in a single dose. Crow[3] has shown that such mutants produce in a single dose (heterozygotes) a slight weakening of survival of the organisms in which they are located. Because of their relatively mild effect these mutants remain in the population from 20 to 40 generations.

Evaluation of the available evidence indicates that over a long term, even the mildest of mutants produces an equivalent amount of damage as the one causing a severe defect. For this reason, the effects of the mild mutants should not be ignored. Although it will be extremely difficult to evaluate cost-benefit calculations for quantifying genetic risks from mutants with mild effects, it is important to look at the less readily detectable mutations as they cause damage to many generations of offspring.

Consequences of Drug Abuse

The multi-generation effects of mutants which produce mild alterations are of significance in investigating the genetic consequences of drug abuse. The difficulties in evaluating the Drosophila data, based as it is on carefully

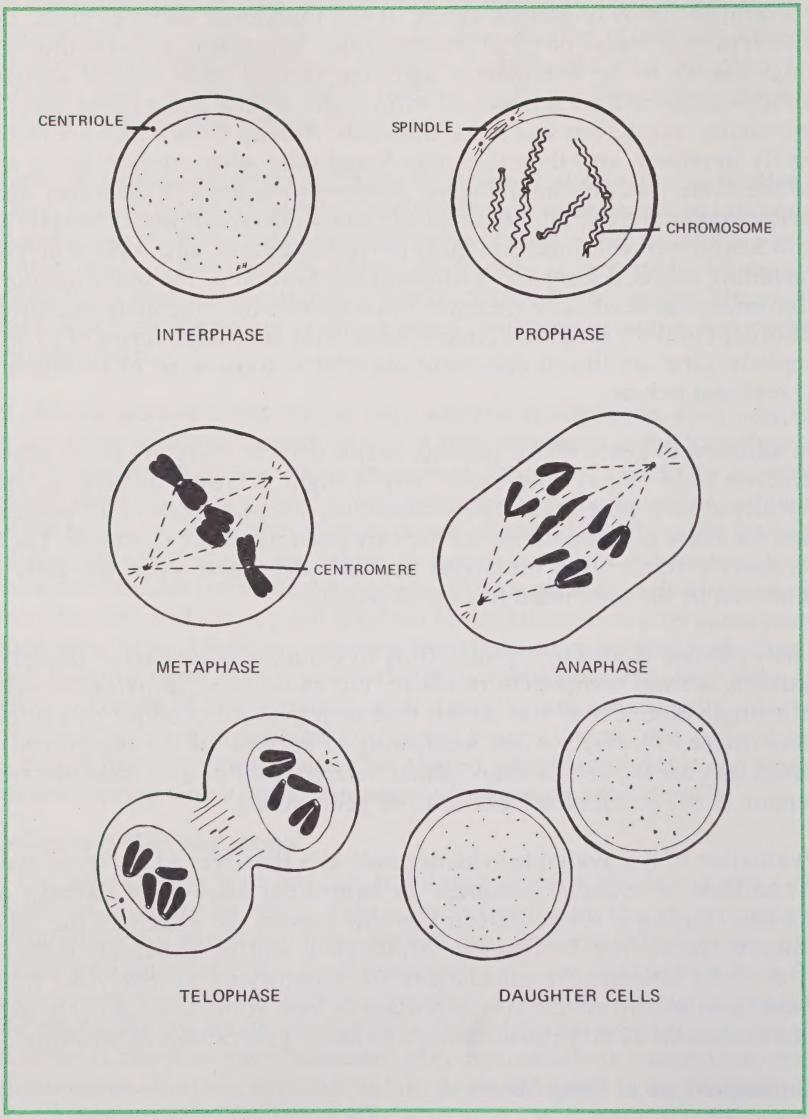

Figure 1: THE FIVE PHASES OF MITOSIS

designed, controlled mating experiments, indicate that it would not be possible to measure such minimal changes in the human population. However, the Drosophila findings suggest that similar damage is occurring in man.

The best time to determine whether a drug produces genetic damage is before it comes into general use. Based on current United States Food and Drug Administration procedures this is the usual practice before a new drug is acceptable for manufacture and distribution. With drugs of abuse, however, they are frequently available through the black market prior to thorough investigation, or else drugs previously approved by the F.D.A. are available on the street in random combinations and without regard to quantity and quality. Standard evaluations are not possible.

The socioeconomic and health problems with which many consumers of these street drugs often find themselves may also make the individual's biologic and genetic response to drug ingestion more difficult to evaluate. Furthermore, the concerns expressed by many illicit drug consumers about the freedom of the individual, the restrictions imposed by society, as well as fear of punitive action by law enforcement officials may cause them to minimize, overlook, or deny, if possible, the harmful effects which result from the drug habit.

These are some of the difficulties which face investigators seeking a definitive evaluation of persons taking illicit drugs. While controlled studies which would meet rigid scientific requirements are not possible with these subjects, one feasible method to predict some possible genetic consequences of drug abuse is that of cytogenetic (chromosome) examination. The analysis is usually based on examination of chromosomes obtained from the white cells of the blood grown for 48 and/or 72 hours in a cytogenetic laboratory.

One important group to investigate for chromosome damage would be those at high risk in the newborn population—infants of parents reporting drug abuse.[4] A general examination of these infants should also be conducted for any sign of congenital defects. To compare for any significant increase in defects, a control population of infants born to parents who do not report the abuse of drugs and are within the same age group, income range, race and economic situation could provide useful information.

Because of the inexact meaning of the term "drug abuse," limited ability to determine both quantity and quality of drugs ingested in the control and the study populations, variations of accuracy in information, inability to precisely establish comparative populations matched for physical health, differences in patient examinations, as well as registration of data among clinics and between public and private health agencies, it should be noted that this is often poor data. Of significant concern for cytogenetic studies is the fact that viral infections also cause chromosome damage.

Cytogenetic Studies

It is important that those who are concerned with drug misuse understand the potential as well as the limits of cytogenetic studies. Chromosome studies will only reveal gross kinds of aberrations. For cytogenetic studies[5] chromosomes are examined during cell division (mitosis or meiosis) because it is only during the stages of division that the chromosomes can be distinctly viewed.

In mitosis, the nucleus and cytoplasm of the two daughter cells are derived from that of the original cell in such a manner that the chromosome number is kept constant. The division of the nuclear material is apparently far more complex than that of the cytoplasm. The phases of mitosis are: 1) interphase, 2) prophase, 3) metaphase, 4) anaphase, and 5) telophase (Figure 1). Until the prophase stage of mitosis, individual chromosomes are not distinguishable, and clear differentiation is possible only in late prophase and early metaphase. In these stages each chromosome appears as two strands attached at a region called the centromere. Each of the strands is called a chromatid. The chromosomes rapidly become thicker and shorter, and centromere division introduces the anaphase stage. During anaphase the newly separated duplicate chromosomes are pulled toward opposite poles by their individual spindle fibers. In telophase the cytoplasm divides producing the two, new daughter cells.

Mitosis is one of five phases in the mammalian cell life cycle. S, the period of DNA synthesis (replication of the chromosomes), is separated from mitosis by an interval called G2, and the period from the end of mitosis to the S phase is called G1. The entire cycle and the phases within it have been evaluated in different organisms. It is estimated that for the human, the entire cycle takes about 20 hours.

Most chromosome studies, particularly in man, are conducted with the

white cells of the blood called the leukocytes. Reliable chromosome counts and analyses of the chromosomes in mitotic metaphase from leukocytes and other somatic tissue are now possible because improved tissue culture and technical procedures enable the supply of a large number of chromosome complements useful for study.

To accumulate a sufficient number of useful chromosome complements at metaphase, drugs (colchicine, Colcemid or Velban) are used to interrupt the spindle formation. Due to the drug action, the duplicated chromosomes are not separated from one another. The limited time in which the drug is allowed to act is not sufficient to cause visible damage to chromosome morphology.

Treatment with a hypotonic solution (one which can pass through the cell membrane from the lesser concentration outside the cell to the greater concentration within the cell) then swells the cells, and the osmotic pressure initiates the spreading of the chromosomes of the complement. The chromosomes are washed and fixed, and further separation is achieved by flame drying or air drying the material containing the chromosomes onto a slide. The slides are stained with Giemsa to give definition to the chromosomes. The chromosomes are studied and counted under the microscope, and pictures of several chromosome complements are taken to confirm the results (photomicroscopy) by karyotyping (standardized arrangement of the 46 chromosomes from a single cell into pairs by number or group).

At least 25 chromosome complements of each individual are studied under the microscope and three to five chromosome complements are photographed for karyotyping. The peripheral blood (white cell) cultures are most commonly utilized because they are easily obtained and require only a short period of time in culture (48 or 72 hours). Theoretically, many tissues should be investigated, for a normal finding in one does not exclude chromosome abnormalities in other tissues. However, a normal chromosome finding in one tissue from individuals in the general population is usually consistent with normal chromosome findings in other tissues.

Chromosomes in Man

The normal diploid chromosome complement of man contains 22 pairs of autosomes (chromosomes other than those of the sex chromosomes) and two sex chromosomes. In the female the two sex chromosomes are similar in size and shape (Figure 2). The male, on the other hand, has

only one X chromosome and a much smaller sex chromosome called Y (Figure 3). At metaphase the chromosomes are approximately one to eight microns in overall length and less than one-half micron in width. While there is variation in chromosome size from one cell to another, a constant relationship between the chromosomes is maintained and individual chromosomes can be usefully matched from one complement to the next.

The 23 pairs of chromosomes are arranged numerically by total length and centromere position into seven groups: A-G.* Metacentric chromosomes display approximately equal arm lengths, while acrocentric chromosomes have one pair of very short arms.

Germ Cell Studies

In contrast to the classical presentation of 46 chromosomes seen in somatic cells, germ cell chromosomes in meiosis are of different shapes and have only half the number of chromosomes. In the human female the oogonia (the primordial cell from which the egg arises) are formed by the fifth to the sixth month of fetal life. In studies before birth, the primary oocytes have completed the first meiotic prophase. All of the primary oocytes remain at this dictotene stage until puberty, and further divisions are only initiated shortly before ovulation into the Fallopian tube. It is expected, therefore, that drug ingestion would result in little (if any) damage to the inactive primary oocytes. Chromosome damage would only occur when meiosis was once again initiated at time of ovulation. In the human female, a major difficulty arises in obtaining tissue for study.

In the male, spermatogonia from primary spermatocytes and spermatogenesis starts with puberty and lasts throughout the reproductive life. While male germinal cells in meiosis would be of value for the detection of heritable chromosome damage, germinal tissue is certainly not readily available from patients for investigation. In studies of animals other than man,[6] meiotic chromosome analyses have proven contradictory.

Types of Damage in Drug Abuse Patients

While banding techniques have not yet been incorporated into cytogenetic

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*The initial arrangement of the chromosomes by number was first agreed on in the 1960 Denver Conference to standardize human chromosome analysis; modification by classification into groups and further definition of several of the chromosomes took place in meetings in London in 1963, Chicago in 1966, and Paris in 1971.

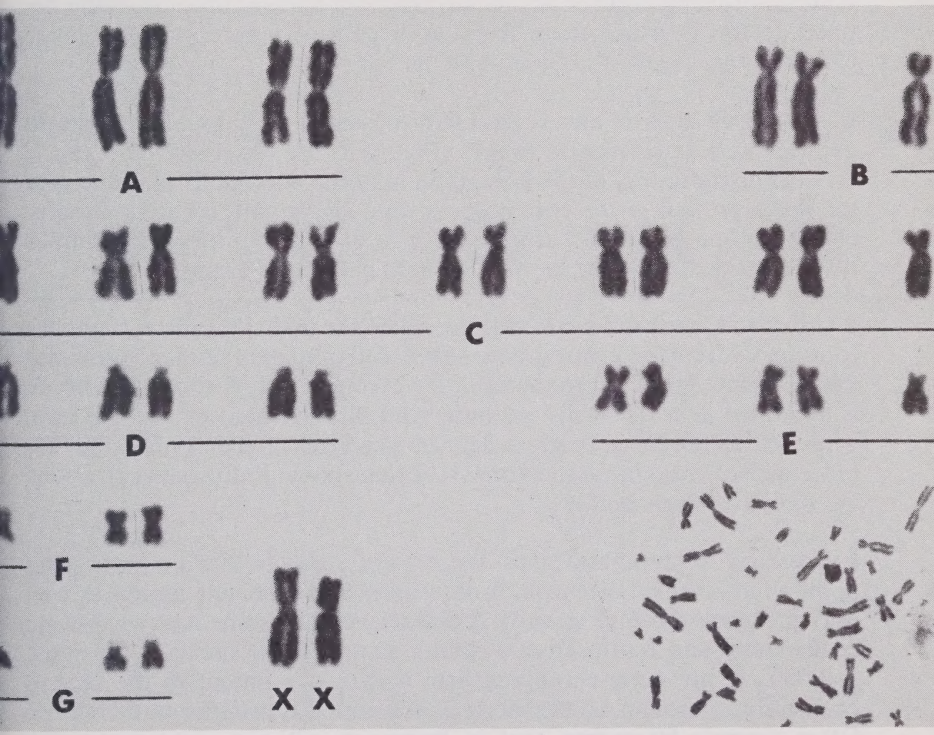


Figure 2: NORMAL FEMALE KARYOTYPE

studies of patients in drug abuse programs, available evidence indicates that some of these patients have a population of cells with damaged chromosomes. The damage observed does not indicate the amount or frequency of use required to initiate or maintain this damage. This chromosome damage is different from that obtained in such disorders as Down's syndrome (Mongolism) or any of the other well-known chromosomally defined defects in which there is a loss or gain of a portion or an entire chromosome, usually throughout all the body cells.

In both drug abusers and control subjects single and double chromatid gaps, as well as chromatid breaks (Figure 4) are observed. The gap is a visual discontinuity of the chromatin material without displacement of the distal portion of the chromosome. In a single gap, the discontinuity occurs on one chromatid arm, while in a double gap there is a similar discontinuity at the same location on both chromatid arms.

A chromatid break differs from a chromatid gap in that the distal fragment (portion far from the centromere) is displaced from the axis of the proximal portion (close to the centromere) of the chromosome. A chromatid break is identified as a visual discontinuity and displacement of a single arm, while an isochromatid break is defined as a visual discontinuity and displacement of both chromatid arms at the same point. Both such aberrations are scored as single breaks.

In addition to chromatid gaps and breaks, patients in a multiple drug population revealed dicentric chromosomes and exchange figures as well as ring chromosomes (Figure 5). A dicentric chromosome has two distinct centromeres and results from a double chromosome break at the same location on the same chromatid arm with reattachment to the second broken chromosome. A dicentric figure is counted as two chromatid breaks. Often acentric fragments—that is, fragments without centromeres—are visible in a chromosome complement with this type of aberration.

A ring chromosome results from a loss of the distal portions of both chromosome arms with attachment of the upper arms to the lower arms of the chromosome.

Significance of Damage

What is the significance of chromosome damage? It is believed that most chromosome breaks rejoin and the original configuration is reestablished

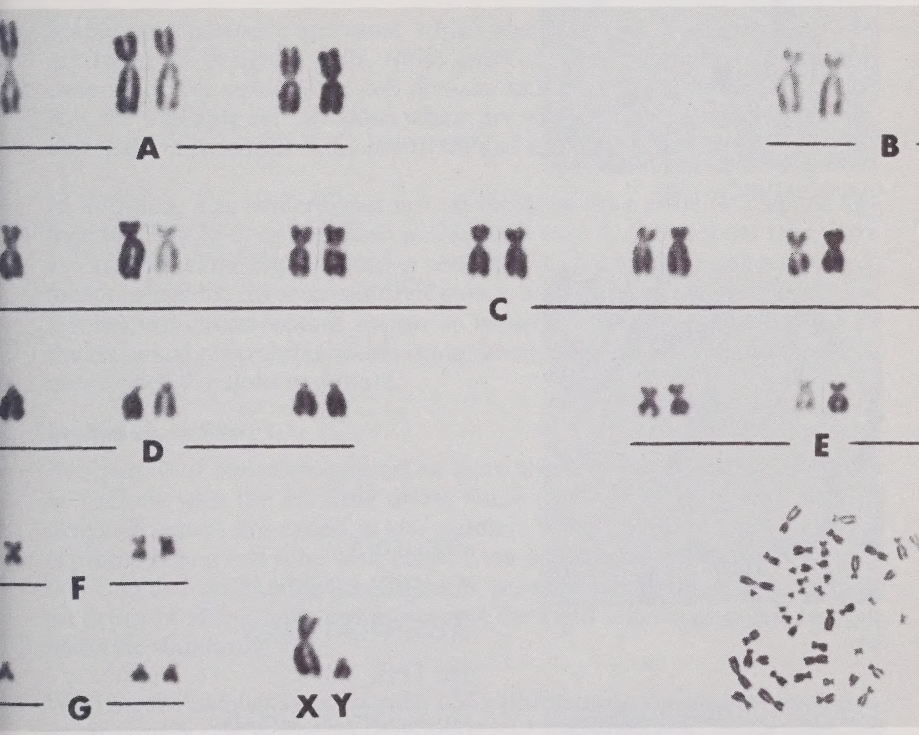
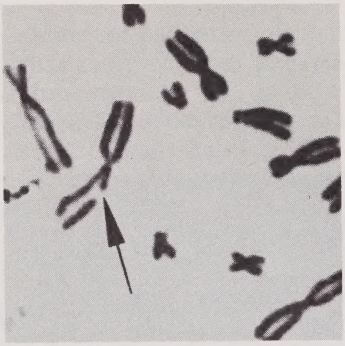
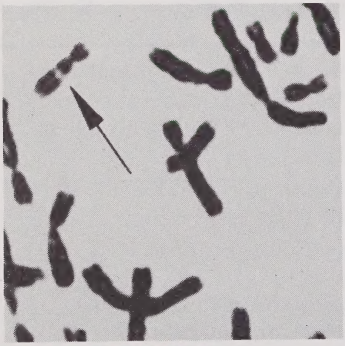


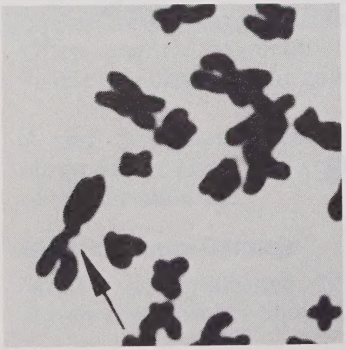
Figure 3: NORMAL MALE KARYOTYPE



DOUBLE CHROMATID
GAP



SINGLE CHROMATID
GAP



SINGLE CHROMATID
BREAK

Figure 4:
CHROMOSOME
ABERRATIONS
IN THE
MULTIPLE DRUG
POPULATION

so that normal mitotic cell division results[8]. If broken chromosome ends do not rejoin but remain unhealed, they do not survive to be transmitted to daughter cells. If breakage occurs to different chromosomes and different chromosome segments rejoin, new chromosomes are formed.

Stable chromosomes are those which can go through cell division and are found in daughter cells, while unstable chromosome configurations cannot survive subsequent cell division and result in the death of a cell. It is the unstable cell divisions which are readily detectable cytologically and these in turn reflect the occurrence of stable aberrant configurations.

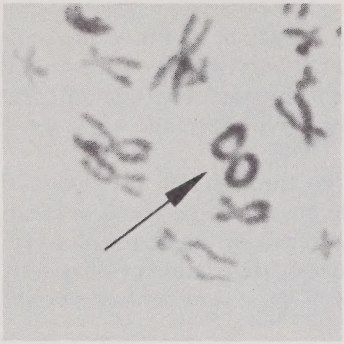
In addition, it is evident that not all multiple drug patients respond cytogenetically to drug ingestion in the same way. It does appear that there are individual differences among persons with regard to lymphocyte chromosome fragility. In certain individuals, as a consequence of drug ingestion, synthesized chromosomes appear to break in response to the trauma of the technical procedures which occur when lymphocytes are induced into mitotic cell divisions in culture.

In Vivo vs. In Vitro

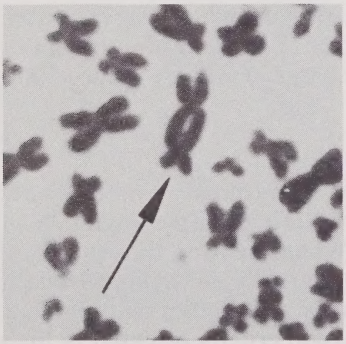
Evaluation of chromosomes taken from the cells (blood or other tissue) of persons with the variable under study (in this example, ingestion of drugs of abuse) are called *in vivo* studies. When the drug for evaluation is placed into a test tube with blood from apparently normal individuals, this is called an *in vitro* investigation. Most *in vivo* studies with patients on drugs of abuse have not as yet met the rigid criteria essential to high scientific standards.

With regard to *in vivo* studies with LSD, problems in design have included small sample size, exposure of patients and control to other drugs, limited data in both groups with regard to radiation therapy, and viral infections immediately prior to cytogenetic study. In almost all instances control subjects for comparison with the patient population have been matched in only the most minimal fashion. *In vivo* studies of illicit LSD and heroin users are reported in Table 1.

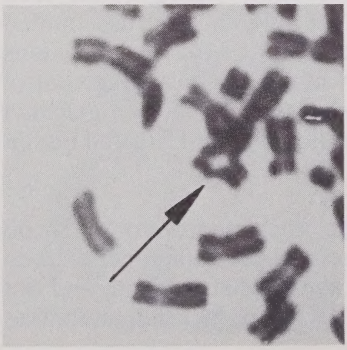
In vitro studies also require special attention. Such studies may show no damage because the drug or chemical in question does not penetrate into the cell. As the cell membrane is selective about what gets into and out of the cell, it may very well be a barrier to all but particular metabolites



RING CHROMOSOME



DICENTRIC CHROMOSOME



EXCHANGE FIGURE

Figure 5:
CHROMOSOME
ABERRATIONS
IN THE
MULTIPLE DRUG
POPULATION

(products of chemical changes in living cells which provide the energy for vital processes and activities of a drug or chemical) available only after breakdown during passage through the liver.

Metabolic alterations may be affected by pH—a method of defining whether a solution is basic (pH 7.1-14), acidic (pH 0-6.9), or neutral (pH 7)—and by other biochemical parameters which control the accessibility and activity of the drug or its products in the cells of the body. These alterations are not included for study in most programs when the drug or drugs are introduced directly into the culture.

In addition to *in vivo* and *in vitro* human cytogenetic studies, a variety of other program designs have been employed utilizing chromosome evaluation, dominant lethal assays and microbial studies to determine mutagenicity. For these programs testing has been conducted in animals other than man.

No Early Detection Method Available

Despite these sophisticated procedures, at the present time we have no reliable method for the early detection of a genetic catastrophe which may be introduced into the environment by new chemicals and drugs. As pointed out by Shaw[9], our methods at present only permit indirect experimental genetic studies which will not detect a rapid increase in damage to the human gene pool which is not anticipated.

In a recent paper Auerbach[10] also pointed out the dilemma caused by current test procedures and the many difficulties inherent in any attempt to extrapolate plant, bacterial, and other animal test data to man. According to Auerbach, the difficulties in this type of testing are threefold: 1) specificity of response, 2) correlation between types of damage, and 3) dose-effect relationships.

With regard to specificity of response, it is well known that chemicals have a wide range of different genetic effects based on differences between species, strains, sex, and individuals. Even in the same individual, different cells and cells in different stages of the cell cycle may vary in response. For example, the chemical urethane has been found to act via a metabolite in both rabbits and mice, but only in mice did it induce tumors. If these related mammalian species showed such striking differences in response to a chemical mutagen, it would be hazardous to extrapolate between

distantly related species such as mice and men.

Auerbach further noted that there is difficulty in the correlation of stable and unstable chromosome damage. She emphasized that chromosome breakage, not followed by reunion, would only result in a dominant lethal and an early abortion, and that there were no procedures to evaluate whether such animals could also produce more stable mutants which would survive and reproduce.

Finally, sufficient knowledge is not available to determine whether it is possible to extrapolate from a system which resulted in a genetic effect at a high dose of potential mutagen to a possible effect at a lower dose. Possibly, physiologically acceptable doses are well below the threshold for genetic effects.

All that is known at present is that there are individual differences in human cytogenetic response to drugs and that in some individuals multiple drug use appears to have a synergistic effect (co-operative interaction) which appears to result in an increased frequency of chromosome fragility. Obviously there is a need to develop more accurate methods to evaluate the potential of all drugs, including drugs of abuse.

A New Possible Procedure

One approach was presented by Cohen[11] at the Second International Symposium on Drug Dependence in Jerusalem. It was his suggestion that among the variety of tests under consideration, there is no single method which will answer all questions regarding the potential hazards of a given agent. He indicated that some drugs had the ability to break chromosomes; others caused gene mutations, but did not break chromosomes. It would be necessary, therefore, to screen drugs which could cause gene mutations or developmental defects with a battery of test systems. In addition, the test systems should also include methods to test for cancer.

One new method that he proposed employed mouse eggs fertilized in the test tube. By treating the unfertilized egg or the developing fetus at an early stage with the drug to be analyzed, evaluation could then be conducted throughout development for potential mutagenic, teratogenic, carcinogenic, or chromosomal effects.

Using this procedure, the fertilized egg after treatment would be implanted

FREQUENCY OF CHROMOSOME BREAKAGE IN ILLICIT DRUG POPULATIONS AND CONTROLS

table 1

Study [a]	Date	Number Patients	Metaphases Counted	Breaks Per cent	Number Controls	Metaphases Counted	Breaks Per cent
Cohen, et al.	1967	18	4282	13.2	12	2674	3.8
Loughman, et al.	1967	8	697	0.0	19	673	0.2
Irwin and Egozcue	1967	8	1600	23.4	9	1800	11.9
Cohen, et al.	1968	14	—	7.5	9	—	1.2
Egozcue, et al.	1968	46	9140	18.8	14	2800	9.0
Sparkes, et al.	1968	4	937	1.4	4	950	1.5
Jarvik	1969	3	—	1.0-4.0	11	—	4.7
Judd, et al.	1969	17	595	1.0	8	280	0.7
Valenti	1969	10	894	10.0	—	—	—
Dorrance, et al.	1970	14	1284	0.8	10	1018	0.8
Dishotsky, et al.	1971	14	1412	0.4	8	805	0.6
Amarose and Schuster	1971	22	2237[b]	14.0	22	2217	7.8
Falek, et al.[c]	1972	16	1173	2.6	16	771	0.4

[a] Illicit LSD among other street drugs except for last study. [b] From peripheral blood as compared with 1.4% from bone marrow. [c] Heroin addicts in methadone program.

into a normally pregnant or pseudopregnant surrogate mother. The implanted fetuses would then be examined at specific times for abnormalities during development. This interesting method is at present limited to an evaluation of those agents which would cause damage to mice or other rodents, and the hazard of extrapolating from mouse to man has been noted previously. The value of such a test, however, would be that it has the characteristics of both *in vivo* and *in vitro* experiments and that it presents the potential for evaluating damage which could occur to developing offspring.

Another difficulty with this type of program is that reproductive success in untreated, apparently normal offspring, from normal surrogate mothers is as yet only at the 50% level. At present, therefore, all test systems contain methodological difficulties related to design and analysis. The aim is to develop the best procedures based on current knowledge and capability to conduct such investigations.

The Need for Data

There is as yet no certain method to detect all damage. Since the risk of damage from the level of the gene to that of clinically visible morphologic defects is not only of significance as a population problem for future generations, but is of immediate concern to the individual and his offspring, the development and evaluation of methods for study of the genetic aspects of drug abuse is of importance.

Discussions from the personal, as well as the legal, point of view should be based on knowledge derived from scientific investigations. If we are concerned about the health of our nation now and in the future, then statements about genetic damage should not be associated only with certain "dangerous" drugs. The population, young and old, must be helped to understand what the data mean, including the data available for commonly used drugs such as aspirin, alcohol, caffeine, nicotine, barbiturates and the others with which many people are involved on a daily basis.

If genetic damage at any level is found to occur either infrequently or often as a result of, or in association with, the use of a particular substance, then that is a fact until it is disproved. There is evidence that drinking and smoking result in serious medical problems. We know tobacco and alcohol are dangerous substances even though they are not effectively labeled as such. But decisions to condone or condemn particular drugs

are often based on social, political and economic considerations, instead of scientifically determined ones.

Since it is the scientist's responsibility to point out the medical and genetic consequences of using certain drugs, or drugs in particular combinations, additional methods to collect data in an objective and unbiased manner need to be developed. It will then be the role of community leaders in education, law, and the social sciences to take an active role in making use of this technical data for the benefit of the community.

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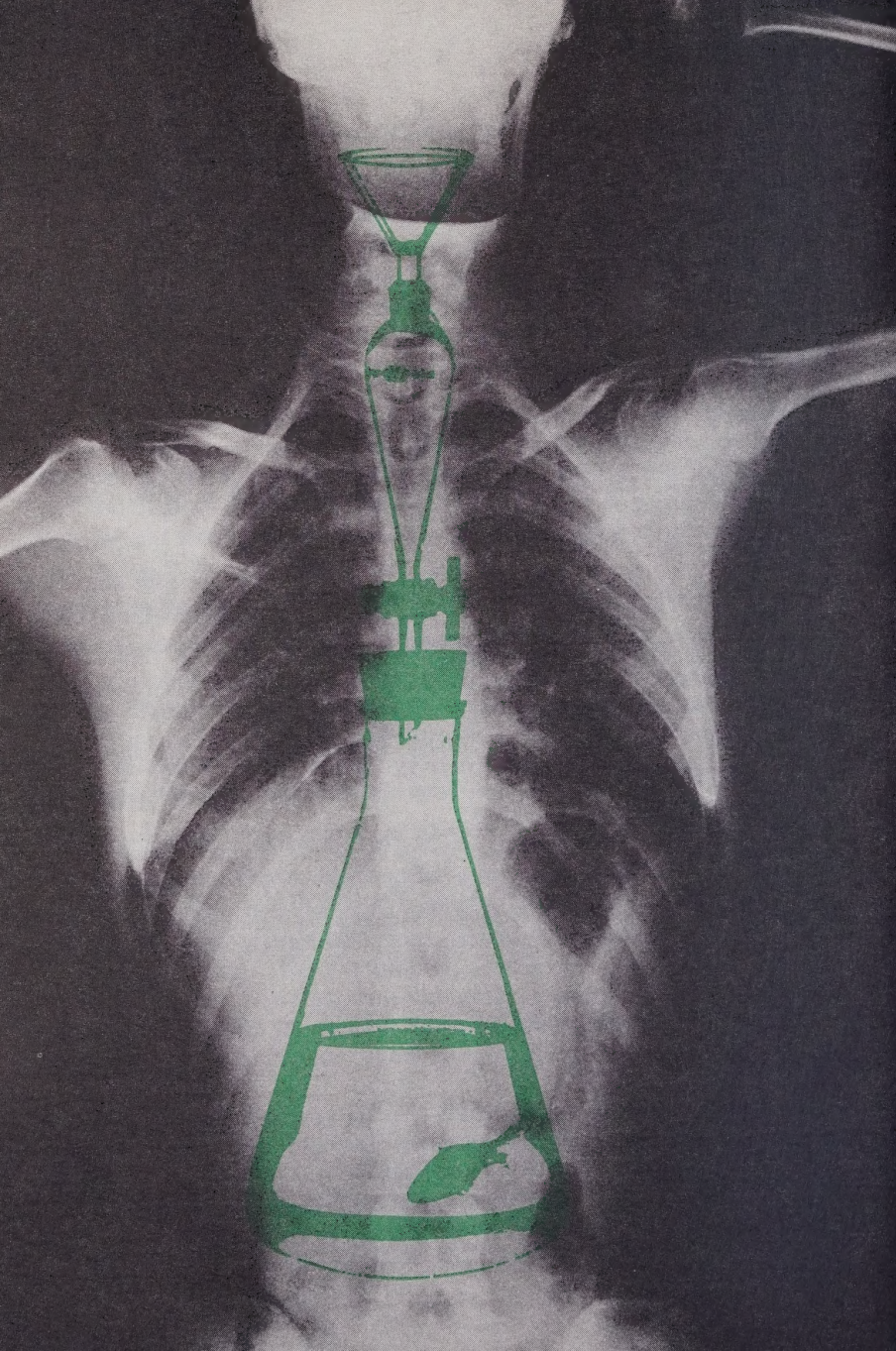

PHOTOGRAPHS BY VILLY SVARRE

ANT-ACIDS

Consumer Reports reports

This article originally appeared in a U.S. publication. Consequently, there might be some products mentioned which are not sold in Canada and others whose formulations may be slightly different. With reference to the rulings on the advertising claims found improper by the U.S. Food and Drug Administration's panel evaluating the safety and potential efficacy of ingredients of antacid products, Canada has never *allowed such claims as "nervous or emotional disturbances," acidosis, food intolerance, morning sickness from pregnancy, gas pains, nausea or guaranteed relief. Despite these differences, however, we think the article will be of interest to Canadian readers.*

Editors.

Over the years, antacid products have been promoted for a host of common ills—from simple "heartburn" or mild indigestion, to bloating, cramps, "gas pains" and "morning sickness." Whether the advertised affliction

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is "gassy-acid nausea" or merely "the blahs," a remedy is allegedly at hand.

More than 575 different tablets, liquids, powders, lozenges, gums and pills compete to soothe our stomach complaints. Yet, less than a dozen brands account for the lion's share of advertising—and sales—in this more than $200 million market.

How safe or effective are these widely promoted brands? And how valid are the advertising claims for them?

Exact answers are elusive, because "indigestion" is a catch-all label for a variety of symptoms, and tests comparing the touted remedies usually lack scientific validity. Accordingly, when a long-awaited report on antacids was released last April by the U.S. Food and Drug Administration, Consumers Union of United States, Inc. was anxious to review it.

The Scientists' Report

Prepared by an independent panel of experts assembled by the FDA, the new report evaluates the safety and *potential* efficacy of *ingredients* of antacid products and recommends appropriate product labeling. We emphasize the words "potential" and "ingredients" because none of the brand-name products studied was actually declared effective or ineffective. The scientists identified ingredients that are *capable* of neutralizing stomach acid. But each product must still pass a test designed by the panel to demonstrate that capability.

Equally important, the FDA panel also identified many *non*-antacid ingredients it considers unsafe or of dubious value in an antacid product. Bile salts, for example, were judged unsafe because they can irritate the mucous membrane of the stomach. Simethicone, on the other hand, was classed in the dubious category, because evidence supposedly showing that it relieves "gas" pains was deemed inadequate. Other claims made for antacid products on the basis of their ingredients were evaluated as well, and those judged inaccurate or unfounded were cited in the report. Finally, the panel also set guidelines for safe dosages of different antacids and proposed specific labeling to prevent their misuse.

Although the report lists each product submitted to the panel, it doesn't comment on specific brands. However, its findings and recommendations

regarding ingredients provide valuable guidance for evaluating products now on the market—especially in terms of safety. Accordingly, with the aid of CU's medical consultants, we reviewed the ingredients of the most heavily advertised or largest selling brands in light of the FDA panel's report. The conclusions we reached were, in some cases, seriously disturbing. But we did find a few contenders among the familiar brands that may indeed offer definite advantages.

Dangers in Self-medication

Our primary concern with each product was its relative safety. But even the safest antacid can invite hazard if it's used for the wrong reason. Part of the problem is the vague nature of indigestion and its many causes. Such symptoms as heartburn, stomach distension, belching, nausea and pains in the stomach or chest are commonly labeled as "indigestion." But the term has no precise medical meaning. Indigestion can be a temporary symptom following an elaborate meal, or a recurrent symptom signaling a more serious problem, such as peptic ulcer. It may result directly from one of several diseases of the upper digestive tract, or may be a sign of disorder in another organ, as in motion sickness or heart disease. One of the most important causes of indigestion-like symptoms in middle-aged men, for example, is coronary artery disease.

An occasional digestive upset following, say, overindulgence, a rough day at the office, or a family squabble is usually no cause for alarm and may be treated with a variety of familiar remedies, including ordinary baking soda. But there are three situations that call for immediate medical attention: any single episode of severe or persistent discomfort, especially if accompanied by sweating, weakness, or breathlessness; any single episode accompanied by vomiting of blood; and repeated episodes of indigestion—no matter how mild. "Repeated" here may mean as infrequently as a few times a month for several months. In such instances, self-medication with an antacid can be dangerous, because it may mask a serious disorder or delay essential medical treatment.

Even in illness where antacids are an accepted part of therapy—such as in peptic ulcer—self-medication without medical supervision can be hazardous. While an antacid may temporarily relieve ulcer pain, that doesn't necessarily mean healing is taking place. The ulcer may still get progressively worse. And if perforation occurs, leakage of gastric or intestinal contents may cause intense pain, infection, shock or even death.

In short, indiscriminate use of antacids for undiagnosed symptoms can involve real perils—a fact that is rarely, if ever, noted in the ads for these non-prescription items.

No Ideal Antacid

While there's no ideal antacid, some types *are* safer than others—particularly for ulcer patients. Nearly all of the brands listed in the chart on page 54 use one or more of the most common antacid ingredients. Unfortunately, some of the most widely promoted ones contain antacids that could prove harmful if used for an extended period—even when taken according to dosage directions.

One of the oldest and most familiar antacids is sodium bicarbonate, or common baking soda. It's currently a major ingredient of *Alka-Seltzer, Bromo Seltzer,* and several lesser known brands, including *Brioschi, Eno, Fizrin* and *Bell-Ans.* Sodium bicarbonate is a potent and fast-acting antacid, but one of the least desirable for regular or frequent use. If taken a few times daily for more than two weeks or so, its alkaline character might affect body chemistry, especially among those with kidney problems. Prolonged use may even lead to stone formation in the urinary tract and may also contribute to recurrent bladder infections. Furthermore, its high sodium content rules it out for people on salt-restricted diets. In short, sodium bicarbonate should be limited strictly to occasional use by healthy individuals.

When sodium bicarbonate and citric acid are dissolved in water—as in the case of *Alka-Seltzer* or *Bromo Seltzer,* for example—the chief end product is sodium citrate. The latter is an effective antacid, but it is metabolized to sodium bicarbonate in the body and hence shares the same disadvantages.

Until a few years ago, calcium carbonate prescribed in powder form was the antacid of choice among many physicians, and it is still the principal antacid in numerous over-the-counter products, including *Tums* and *Pepto-Bismol* tablets. In many respects, it's an excellent antacid—providing rapid action, high neutralizing capacity and prolonged duration of effect at low cost. But recent research reveals that it can also cause an "acid rebound;" that is, it can stimulate increased secretion of stomach acid that may persist long after the antacid action has ended. Consequently, its effect may be, to some extent, self-defeating.

In addition, calcium carbonate tends to cause constipation; and, more seriously, its prolonged use may raise calcium in the blood to undesirable levels and cause impaired kidney function and possible stone formation. The likelihood of developing high blood calcium levels appears to increase for those who also consume large amounts of milk or cream frequently or who have kidney problems to begin with.

To prevent harmful effects, the FDA antacid panel advises against taking more than eight grams of calcium carbonate daily. Labeling proposed by the panel would also limit that dosage level to a maximum period of two weeks, "except under the advice and supervision of a physician." Each *Tums* contains approximately a half gram of calcium carbonate. A *Pepto-Bismol* tablet contains about one-third of a gram. Thus, the maximum daily dosage of *Tums*, for example, should not exceed 16 tablets nor extend beyond two weeks. The experience of CU's medical consultants indicates that many current users exceed those amounts.

Some Safer Alternatives

In contrast to its warnings on calcium and bicarbonate, the FDA panel found two other common antacid ingredients to be relatively nonhazardous. It judged aluminum compounds to be safe in amounts usually taken, and placed no dosage restrictions on them. It reached a similar verdict on magnesium salts, except for patients with chronic kidney diseases. Since those patients have less capacity to eliminate magnesium from their bodies, the panel set a dosage limit in such cases.

The most widely used aluminum compound is aluminum hydroxide. Although its onset of effect is slow and its neutralizing capacity variable, aluminum hydroxide provides relatively prolonged antacid action. It is also constipating, however, and therefore is often combined with magnesium salts, which tend to have a laxative effect.

Most frequently, it is combined with magnesium hydroxide, which is also available separately as milk of magnesia. The latter is a fast-acting and effective antacid, but it can have a laxative effect if repeated doses are taken through the day. Products employing aluminum and magnesium hydroxides together include *Di-Gel*, *Maalox* and *Mylanta*, as well as many lesser known brands.

Another frequent combination is aluminum hydroxide and magnesium

trisilicate. Like the aluminum salt, magnesium trisilicate's antacid action is slow in onset but comparatively long in duration. Unlike aluminum, however, it tends to have a laxative effect rather than a constipating one. The most familiar product using this combination is *Gelusil*, but various others are available, including *A.M.T.*, *Malcogel* and *Trisogel*.

Antacids and Low-salt Diets

Many antacids contain large amounts of sodium salts, which could be harmful to individuals with high blood pressure and patients who must restrict sodium intake for whatever reason. A heart patient, for example, who may be allowed only 1000 (strict) to 2000 (mild) mg of sodium daily, would quickly upset that regimen with a single dose of *Alka-Seltzer* or *Bromo Seltzer*. In a customary two-tablet dose, *Alka-Seltzer* contains 1042 mg of sodium. *Bromo Seltzer* has 748 mg per capful. Any antacids containing more than 115 mg of sodium per maximum daily dose were judged unsuitable by the FDA panel for people on low-salt diets.

Furthermore, many persons have undetected heart or kidney disorders. "Since the prevalence of these conditions increases with age," the panel noted, "it is advisable to place a more severe limit on sodium dosage for persons over 60 years of age." Accordingly, the panel recommended a maximum safe limit of 2300 mg of sodium per day in antacids for *anyone* over 60. By comparison, the maximum daily dosage suggested on the labels of *Alka-Seltzer* and *Bromo Seltzer* would contain nearly double the safe amount of sodium.

Of course, the sodium content of antacids varies widely from brand to brand. The chart on page 54 gives the amount of sodium per dose unit for the heavily promoted brands.

Overall, each of those brands also has other possible assets—or liabilities—for the individual user. However, since all contain antacid ingredients recognized as effective by the FDA panel, CU believes that the most important consideration in choosing one over another at present is its relative safety. As our foregoing review of antacid ingredients indicates, we found some wide differences.

Sales Outrun Safety

Far and away the leading brand in advertising, *Alka-Seltzer* also outdis-

tances all of its competitors in sales. But from a safety standpoint, how well merited is that success?

A few years ago, some television ads for *Alka-Seltzer* touted it as a sovereign cure for "the blahs." After reviewing the product for safety, we wish such a remedy existed. In addition to *Alka-Seltzer's* high sodium content, which could be hazardous to the elderly and those on low-salt diets, it also offers an excessive amount of citrates. A maximum dose of eight tablets in 24 hours exceeds the safe limit for citrates recommended by the FDA panel. It also shares all of the disadvantages of its chief ingredient, sodium bicarbonate, which makes it unsafe for regular use.

Another serious drawback is its aspirin content, which can be dangerous in an antacid. For occasional use as a pain reliever, the aspirin in *Alka-Seltzer* has some merit. It has to be dissolved first in water, which reduces its time in the stomach and hence minimizes gastric irritation. But when used as an *antacid*, its aspirin content offers no benefit yet could cause harm in some instances—especially if the symptoms stem from ulcers or other serious stomach disorders.

In experiments, unbuffered aspirin causes more irritation to the stomach lining than strongly buffered aspirin. "However," the FDA panel points out, "the actual clinical condition of major gastro-intestinal hemorrhage associated with aspirin ingestion has been seen with both unbuffered and strongly buffered aspirin in solution." The panel concluded that antacid-aspirin combinations are irrational for antacid use alone and should not be marketed for such use.

Two months after the panel report was released, three specialists in gastro-intestinal disorders testified before a Senate subcommittee and again confirmed the acute danger of using *Alka-Seltzer* for stomach problems. One specialist reported that in a single hospital he had witnessed five cases of gastro-intestinal hemorrhage caused by taking the product. In each instance, *Alka-Seltzer* had been used by the patient to treat symptoms arising from ulcers or other serious disorders of the stomach. That temporary "cure" for pain had only aggravated the damage.

Over the years, CU's medical consultants have repeatedly advised against using *Alka-Seltzer* as an antacid. Its continued popularity, in our judgment, is a triumph of advertising over medical facts. It is also a clear defeat for public health education.

A Rival for Dubious Achievement

Like *Alka-Seltzer, Bromo Seltzer* adds analgesic to a potent dose of antacid. Its analgesics—acetaminophen and phenacetin—are unnecessary in an antacid but do not irritate the stomach as aspirin does. That may be small consolation, though, to anyone who is adversely affected by caffeine. *Bromo Seltzer* contains approximately 32.5 mg of caffeine per capful—or about the same as a quarter of a cup of brewed coffee. Caffeine stimulates acid secretion in the stomach and is therefore inappropriate for ulcer patients. Its presence in an antacid is no more justifiable than that of aspirin. In short, instead of aspirin, *Bromo Seltzer* substitutes two ingredients that are unnecessary in an antacid and one that should not be there at all.

Meanwhile, persons who may be at risk from high levels of sodium or heavy doses of bicarbonate will fare no better with *Bromo Seltzer* than with *Alka-Seltzer.* Moreover, anyone taking more than three capfuls of *Bromo Seltzer* in one day would ingest more than eight grams of citrates—the maximum safe limit recommended by the FDA panel. Overall, while *Bromo Seltzer* trails well behind *Alka-Seltzer* in advertising and sales, it runs neck and neck in dubious safety credentials.

In the judgment of CU's medical consultants, ordinary sodium bicarbonate will neutralize stomach acid as adequately as any of the costlier products containing it. People who would rather take an effervescent product, however, should be careful to choose one that is basically a straight antacid. Such products as *Brioschi* and *Eno,* for example, contain no active ingredients other than antacids. Both are high in sodium bicarbonate, though, and consequently should *not* be used regularly or by people on low-salt diets. *Fizrin,* on the other hand, contains aspirin and is similar in composition to *Alka-Seltzer.* Accordingly, CU's medical consultants judge it to be an equally poor choice as an antacid.

Tums and *Rolaids* are both available in convenient roll packs, but there the similarity ends. As mentioned earlier, the main antacid in *Tums* is calcium carbonate. *Rolaids,* in contrast, contains an antacid that combines the properties of sodium bicarbonate and aluminum hydroxide. While *Tums* is low in sodium, *Rolaids* contain 53 mg of it per tablet—which is high for anyone who must restrict salt intake. *Tums,* on the other hand, may cause an acid rebound, because of the calcium in it—a possible disadvantage not shared by *Rolaids. Tums* also has a small amount of magnesium

salts—17 mg per tablet. In much larger quantities, such salts would produce a laxative effect. But whether the minor amount included here is enough to offset the constipating effect of 489 mg of calcium carbonate per tablet is open to question. The manufacturer claims on the label that *Tums* is "not a laxative." We believe it.

Occasional use of either *Tums* or *Rolaids* presents no hazard. However, because of the calcium content of *Tums* and the sodium bicarbonate properties of *Rolaids,* neither product is suitable for frequent, long-term use.

The Double Life of Pepto-Bismol

Label claims for *Pepto-Bismol* liquid and tablets might lead a buyer to think that both forms of the product were much the same. Each offers "soothing" or "guaranteed" relief of upset stomach, indigestion, nausea and "common" diarrhea. However, a closer look at the ingredients reveals that the two products are quite different. While the tablets contain two antacids—calcium carbonate and glycocoll—the liquid has none at all.

An inquiry to the manufacturer, Norwich Products, confirmed that *Pepto-Bismol* liquid is not an antacid. CU was also told, moreover, that calcium carbonate was included in the tablets primarily for its constipating effect. Accordingly, those taking the tablets for acid indigestion might get more than they bargained for. In view of potential side effects, including possible darkening of the tongue and blackening of the stools (which may possibly mask gastro-intestinal bleeding from an unsuspected ulcer), we can see no reason to choose *Pepto-Bismol* tablets for antacid use. The liquid, of course, should not be a candidate at all. Neither product was submitted to the FDA panel for evaluation.

Like any brand of milk of magnesia, *Phillips' Milk of Magnesia* is an effective and generally safe antacid. The problem with all such products, however, is their laxative effect. Ordinarily, the antacid dosage is one to three teaspoons. The same product is advertised as a laxative at a dosage of two tablespoons (six teaspoons). Consequently, persons who repeat the antacid dosage or who are more susceptible than others to its laxative action may experience that unwanted side effect.

People with chronic kidney disorders should not use milk of magnesia or other magnesium antacids on a regular basis except under the supervision of a physician. More than three teaspoons (or more than four tablets)

per day of *Phillips' Milk of Magnesia* would exceed the safe limit for magnesium set by the FDA panel for chronic kidney patients. When an antacid is needed on a frequent basis, such patients usually receive an aluminum-based product, such as *Amphojel*, although it may be alternated with magnesium salts to prevent constipation. Aluminum compounds also decrease the absorption of phosphate in the intestine, an effect that may benefit kidney patients who have elevated blood phosphate levels.

For Efficacy and Safety

In the final analysis, the products most likely to offer safety and a minimum of side effects—particularly for long-term use—are those containing aluminum and magnesium compounds. Among the familiar brands are *Di-Gel, Gelusil, Maalox* and *Mylanta. Di-Gel* and *Mylanta* also contain simethicone, however, which the manufacturers say relieves "gas" pains and flatulence. We noted earlier that the FDA antacid panel found such claims to be unsupported by valid scientific evidence.

Gelusil is also different from the other three in that it contains magnesium trisilicate rather than magnesium hydroxide. A recent study in *The New England Journal of Medicine* indicates that products with magnesium hydroxide are faster in onset of action and higher in acid neutralizing capacity than those with magnesium trisilicate. However, both compounds were judged potentially effective by the FDA panel.

Maalox contains both aluminum hydroxide and magnesium hydroxide—a desirable combination—and avoids unproven ingredients such as simethicone. Other products of this type include *Aludrox, Creamalin, Magnesium-Aluminum Hydroxide Gel USP* and *WinGel.*

Unfounded Product Claims

Among the most important findings of the FDA panel were its conclusions about product claims. The panel declared that antacids could relieve heartburn, sour stomach or acid indigestion, but that any other claim was unfounded. Assertions that a product would aid nervous or emotional disturbances, "acidosis," "food intolerance" or morning sickness of pregnancy were found untruthful or inaccurate. Also judged unproven or unlikely were claims for relieving such symptoms as "gas," nausea, upset stomach, "full feeling" and the like. In short, the panel concluded that an antacid will do one thing: It will neutralize acid—period.

If FDA regulations now being proposed for antacids are adopted, each product will have to demonstrate that it neutralizes a specific amount of acid under test conditions. Products meeting the standard can be labeled antacids and may claim to offer relief for heartburn, sour stomach and acid indigestion. Any other claim will have to be verified by clinical trials within two years or be excluded from the label. Products containing substances that are safe but unproven in value will be allowed to remain in use during that period, provided their other ingredients pass the efficacy test. After that time, they would be taken off the market—unless valid evidence for retaining such substances was presented. Under the proposed regulations, labeling will also have to include the FDA panel's recommendations for maximum safe dosages and other specific warnings.

Meanwhile, until appropriate labeling is adopted, CU suggests the following guidelines:

- Do not use any antacid regularly for more than a few days except under the advice and supervision of a physician.
- If you are on a sodium-restricted diet, consult the chart on page 54 for an antacid low in sodium or ask your physician or pharmacist for a recommendation.
- Confine sodium bicarbonate or calcium carbonate antacids to occasional use only, and give preference to products with aluminum and magnesium ingredients.
- Ignore all claims for relief of symptoms other than heartburn, sour stomach and acid indigestion.
- Most important, if repeated or painful episodes of indigestion symptoms occur, stop self-medication and consult your physician.

INGREDIENTS OF SELECTE

	Form	Major antacid	Other ant
ALKA-SELTZER	Tablet	Sodium bicarbonate	Monocalci phospha Citric ac
BROMO SELTZER	Granules	Sodium bicarbonate	Citric acid
DI-GEL	Liquid	Aluminum hydroxide Magnesium hydroxide	—
	Tablet	Aluminum hydroxide Magnesium hydroxide	Magnesiu carbona
GELUSIL	Liquid or tablet	Aluminum hydroxide Magnesium trisilicate	—
MAALOX	Liquid or tablet	Aluminum hydroxide Magnesium hydroxide	—
MYLANTA	Liquid or tablet	Aluminum hydroxide Magnesium hydroxide	—
PEPTO-BISMOL	Tablet [B]	Calcium carbonate	Glycocoll
PHILLIPS' MILK OF MAGNESIA	Liquid or tablet	Magnesium hydroxide	—
ROLAIDS	Tablet	Dihydroxy aluminum sodium carbonate	—
TUMS	Tablet	Calcium carbonate	Magnesiu trisilicat Magnesiu carbon

[A] Maalox No. 1 *contains 1 mg of sodium per tablet;* Maalox No. 2 *contains 2 mg.* [B] *The liquid f of* Pepto-Bismol *is not an antacid.*

SOURCES: Product label; "Handbook of Non-Prescription Drugs," 1973 Edition, American Pharmaceuti sociation; *The Medical Letter,* April 13, 1973; and product manufacturer. Sodium content of *Seltzer* is estimated from product ingredients.

ANTACID PRODUCTS

Non-antacid	Approximate sodium content
Aspirin	521 mg per tablet
Phenacetin Caffeine Acetaminophen	748 mg per capful
Simethicone	9 mg per teaspoon
Simethicone	9 mg per tablet
—	7 mg per teaspoon; 5 mg per tablet
—	6 mg per teaspoon; [A] 1 or 2 mg per tablet
Simethicone	4 mg per teaspoon; 1 mg per tablet
Bismuth subsalicylate	Less than 1 mg per tablet
—	1 mg per teaspoon; 2.5 mg per tablet
—	53 mg per tablet
—	3 mg per tablet

WHAT THE MAJOR ANTACID INGREDIENTS DO

Aluminum Hydroxide. Slow in onset of action but prolonged in duration of effect. Safe for long-term use, even for patients with kidney impairment, but may be constipating.

Calcium Carbonate. Fast-acting, high in neutralizing capacity, and prolonged in duration of effect. However, may cause "acid rebound" and may be constipating. Unsuitable for long-term use.

Dihydroxy Aluminum Sodium Carbonate. Combines some of the rapid action of sodium bicarbonate and sustained effect of aluminum hydroxide, but is unsuitable for long-term use and relatively high in sodium.

Magnesium Hydroxide. Fast-acting and high in neutralizing capacity, but may have a laxative effect. Safe for long-term use, although dosage must be controlled for patients with kidney impairment.

Magnesium Trisilicate. Slow in onset of action but prolonged in duration of effect. May have laxative effect, but safe for long-term use. Dosage must be controlled for patients with kidney impairment.

Sodium Bicarbonate. Fast-acting and high in neutralizing capacity, but unsuitable for frequent or long-term use. Should not be used at all by patients on low-salt diets.

Sodium Content. Antacids with more than 115 mg of sodium per maximum daily dose should not be used by patients on low-salt diets, except under the advice and supervision of a physician. In general, products containing nine mg or less per normal dose are preferred for such use.

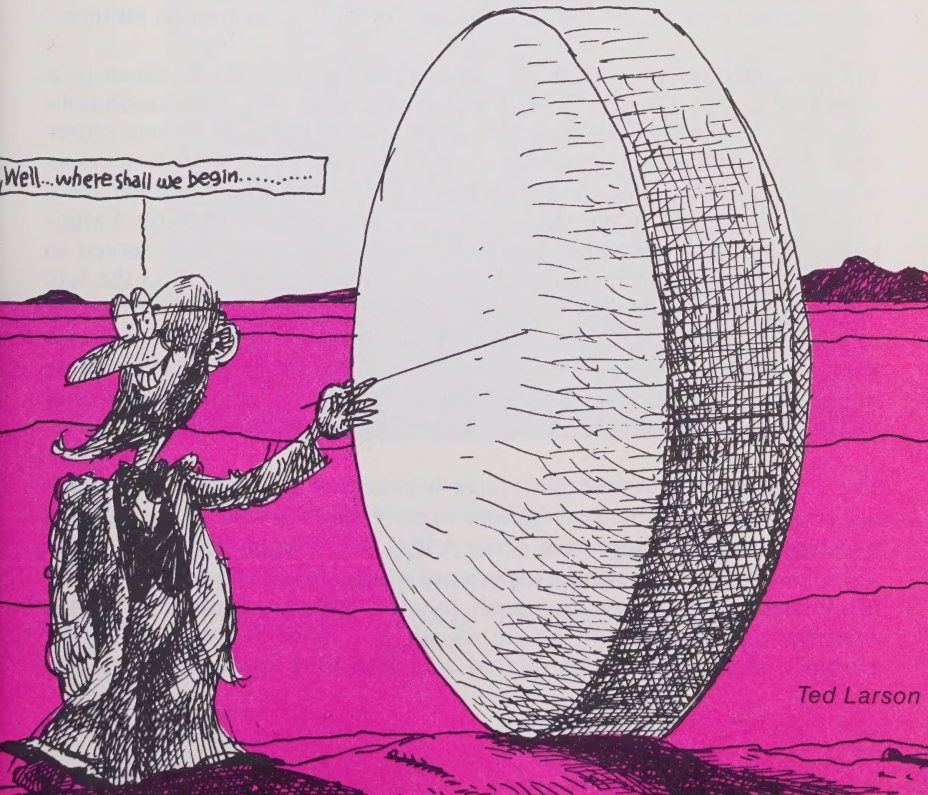
A COLLEGE COURSE FOR ADDICTION COUNSELLORS

by Irene Parikhal

Since 1968, Toronto's George Brown College has been providing skilled people for the community.

When addiction and drug abuse crested the wave of the psychedelic, freaked-out '60s, public panic flooded through every media. Janet Fowlie, then a secretary at the Metro Toronto office of the Addiction Research Foundation, remembers: "Everyone was trying to set up *something*. We were getting over 50 calls a day for information and advice." Before the

Ms. Parikhal is a freelance broadcast and magazine writer whose work has appeared in Canadian and U.S. publications, and is a regular contributor to CHUM radio in Toronto.



deluge, Jan and two others easily handled requests for information by telephone during office hours. Suddenly a 24-hour information service was necessary. Kids on bad trips called for reassurance and bewildered parents rushed in to consult counsellors. Fact sheets were written for general distribution and information kits were assembled for hospitals and community professionals. No one knew much about illicit drugs then. Public ignorance created public pressure—and the plea for help.

It was this climate of chaos which gave birth to an intensive addiction counsellors course, designed not only to help solve the current crisis but to be valid even for the future. In collaboration with Toronto's George Brown College of Applied Arts and Technology, the Addiction Research Foundation set up a two-year program to teach people the basics of counselling therapy, to train them to deal with the community's problems as addiction counsellors. "It was," says Lawrence Purdy, then regional director for A.R.F. and involved with structuring the course, "a breakaway from the traditional concepts that health care is exclusively medically-oriented and that crisis centres should only be run by the counter culture."

Today, public outcry against "the drug problem" has settled down to a slow simmer. The press contents itself with notations of the latest marihuana seizures, while magazines carry lengthy articles designed to inform rather than alarm. Since 1968, when the George Brown College addiction counsellors course began, hospitals, clinics and the general population have become increasingly sophisticated in their knowledge about drugs. Extensive research and the recent Le Dain Commission report have served to de-emphasize the "problem" and calm the hysteria prevalent in the late '60s. Drugs are no longer the *cause célèbre* they used to be. From its inception to the present, the addiction counsellors course has dealt with these changing trends in society and met the challenge head on. A wide range of addictions are studied, including the increasing abuse of alcohol by high school students, originally the prime market for illicit drugs.

The very first class to take the course consisted of 19 students with varying backgrounds. Most had limited experience in the field. Some were registered nurses or employees of the A.R.F. All brought with them enthusiasm and a drive to make the experience worthwhile. In fact, a continuing reassessment of progress and goals by staff and classmates has been a contributing factor to the program's success. Since September '73, for example, the course is also offered as a part-time studies program for

JAN FOWLIE, PROFESSIONAL DEVELOPMENT OFFICER, A.R.F. REHABILITATION PROGRAMS:

"I made the choice of a career from my first year placement in the Whitby Psychiatric Hospital."

people already employed in the field of addictions or related areas and who are unable to attend the full-time two-year program. The same teachers are conducting both courses to ensure consistency.

The course outline covers five major areas each week. Human Growth and Development deals with the normal patterns of social, emotional and intellectual development and also looks into difficult and deviant behavior. Social Services and Legislation covers health, welfare, education and correction services as well as legislation and legal problems relating to drug and alcohol use. A course in pharmacology develops appreciation of drugs affecting the central nervous system, while the theory and practice of therapy teaches various techniques of treatment through case presentations, tapes, films, group discussions and involvement. Finally, there is a general history of addictions, with special reference to life in the chemical age.

Besides the theory, students gain practical experience by working under professionals in medicine, psychiatry, social work, psychology, education and pastoral counselling at such where-it's-happening places as the Donwood Institute, A.R.F., Whitby Psychiatric Hospital, youth centres, mental health clinics and crisis centres. Two days a week are spent in the field the first year and three days each week during the second. Responsibilities vary from participation in assessment and treatment planning to individual, family and group counselling to community work and drug education. By the time they finish the course, the students have had at least 1,000 hours of practical training to their credit.

The class also participates in two-hour "group process" sessions every week throughout the two-year program. This aspect of the course has affected profoundly every student from the inaugural class to the present one. Jean Dodds, one of the original teaching staff and organizers of the program, describes group process this way: "Students discuss themselves and learn to untangle their feelings about each other. They learn a lot about what it feels like to be a patient. They learn to counsel themselves." Problems of therapy concepts and field work are examined and worked out also. A recent graduate, Kathy Burns, thinks the closeness class members feel after group process is very rewarding in itself. "You had to keep re-evaluating why you were there, and what you were getting out of it. It was tough. But the knowledge that 15 other people were in

JEAN DODDS, SOCIAL WORKER, A.R.F. INDUSTRIAL CLINIC:

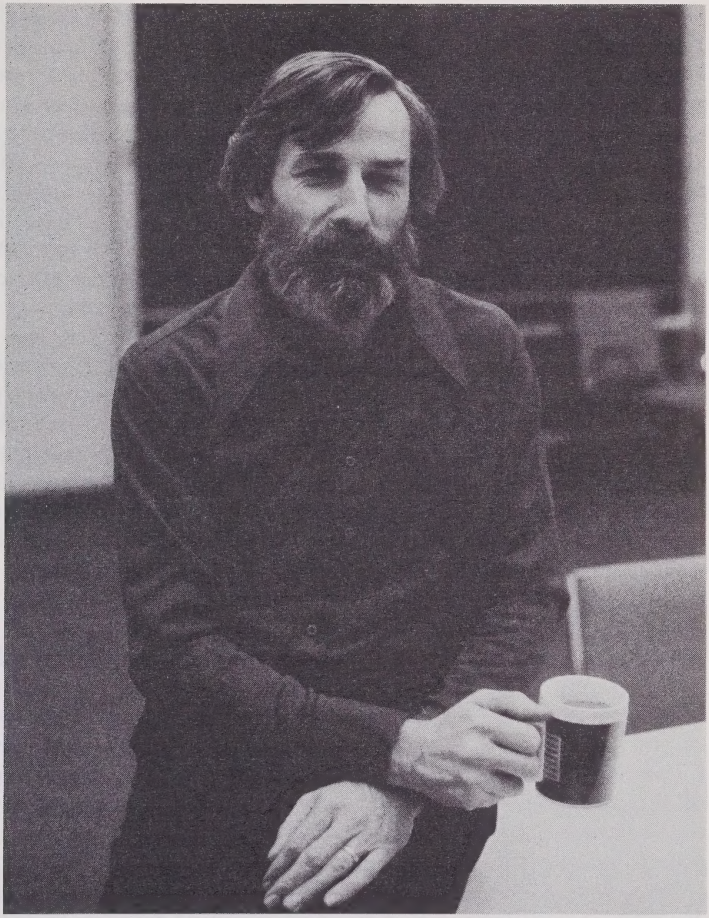
"Students learn a lot about what it feels like to be a patient."

it with you helped." Doreen Birchmore, a nurse now working at the Donwood Institute, found this element of the course vital to her present job. "It helped because I am doing groups now. You can't really do groups until you know yourself. When you think back on it, you see it as a really great experience." In the present course, students who have participated in group process since September share the same zest for the experience as the first graduates in 1970.

Selection of applicants for the addiction counsellors course involves a screening process to ensure a cross section of students who can relate to and learn from each other's experiences throughout the course. Although mature applicants with volunteer welfare experience are preferred, people who have good life experience are also eligible. Stable, energetic people, relatively free from personal problems, who can communicate well on a feeling level and who show warmth and empathy are given the highest preference. The course guide states that grade 12 is a necessary prerequisite. Explains Bill Vine, who has taught the course for three years, "We are striving to create conditions for an effective group learning process for which we require variety in age, sex, personality and life experience." More than 500 applicants were screened for the present 24 places.

The classes are flexible. They incorporate teaching techniques such as lectures, seminars, films and practice labs in various hospitals and agencies. Few textbooks are compulsary. The emphasis is on reprints from the latest studies in the field to ensure that students get the benefit of up-to-date information.

Several students outlined the ways in which the classes helped them. All agreed that it was a tremendous growth experience. Although a class assignment might have been the same for everyone, attention was given to the individual, and different approaches to topics were encouraged. Kathy Burns, who began her career doing volunteer social work, said, "The class was very informal. You could enjoy it. It was different from any other learning experience." Wendy Ostin, a recent graduate who did volunteer work in England with street drug addicts before enrolling at George Brown, believes, "It helped in forming concrete ideas about society, drugs in society, ideas about the helping professions, plus specific data on helping agencies in Toronto." Ken Williams decided to go to university after graduating from the program. He also became involved in supervising an "after four" program of activities for the YMCA, working out of a



BILL VINE, INSTRUCTOR:

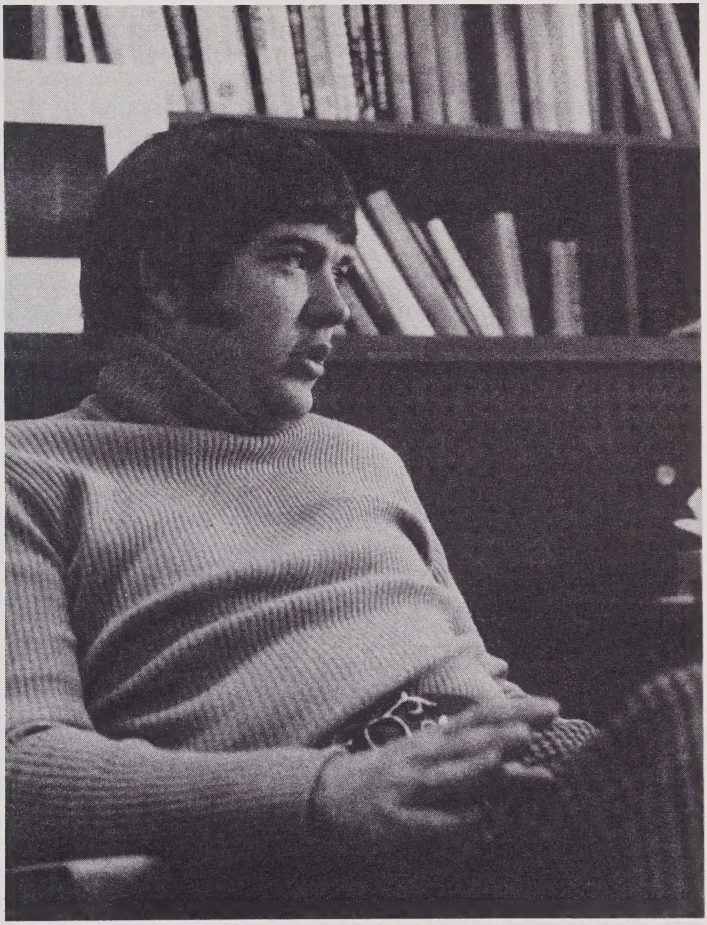
"The community still needs expertise in the use and abuse of drugs."

public school. For Janet Fowlie, employed at the A.R.F. before and during the program, and one of the original class members, the course focused her career ambitions. "I made the choice of a career from my first year placement in the Whitby Psychiatric Hospital's alcoholism treatment centre." Jan is now working back at A.R.F. as a counsellor to male, chronic alcoholics, "with a raise in status after the course." Beryl Cardy, a student in the present class, was working in Parry Sound in the social work department of a general hospital. Frustrated by her position, with little knowledge of alcohol or drugs, she felt she had to do something more. "I want to work with Indians since I am a native Indian. I can't praise the course enough. It's fantastic! We're all learning from each other."

Jack de Boer studied in the first session of the George Brown College addiction counsellors program, and is now co-ordinating and teaching the present course. He outlines some of the ways in which the program has evolved over the past few years. "Because most therapists and counsellors are also doing community work, there is a move towards the educational role as well as the treatment role." Now they are training students to work with a healthy population—teaching, educating and informing parents, guidance counsellors and other concerned people in preventive treatment.

Since this is the only addiction counsellors course of its kind offered in Canada, one of the difficulties encountered has been determining job categories, not only in definition, but also in wage brackets suitable for the graduates. Some students feel the lack of public awareness about the special nature of their two-year studies has handicapped their chances of obtaining jobs they are ideally trained to fill. They believe some system of recognition or certification of the course would clarify their skills and potential capacity to fill the needs of agencies and hospitals. Dr. Garry Prince, who supervised several students during their placement at the Toronto East General and Orthopaedic Hospital's mental health clinic sees them as "mental health workers." They were trained and treated as such under his guidance. Dr. Prince was favorably impressed by their performance. Although some students are "green" when they first come to him, after a year of teaching and practice they "end up with a broad perspective of what you come in contact with in mental health care."

Dr. Jim Ricks at Whitby Psychiatric Hospital is now supervising two students from the present course. A Ph.D. in clinical psychology with



JIM RICKS, DIRECTOR, ADOLESCENT UNIT,
WHITBY PSYCHIATRIC HOSPITAL:

''They were the best group of students I ever had.'

extensive background in community work, Dr. Ricks at one time lectured at Toronto's York University and taught Theories of Psychotherapy to students in the George Brown addiction counsellors course. He has, therefore, firsthand knowledge of the depth and breadth of the course. His assessment of the students? "They worked like Trojans. They were the best group of students I ever had. There was a great rapport...a varied, enthusiastic class. If a person goes into the addiction counsellors course with a B.A. he or she should have a master's degree after the course."

One graduate of the course debated going back to university for an M.A. or taking the addiction counsellors course. She decided on the latter because it offered practical experience the M.A. program did not provide. She looks back on this experience as something she could never get from a university. Yet she feels that on the job market, community college diplomas do not offer the same status as master's degrees. Consequently, her choice may have negated a comparable and fair salary for her skills.

Bill Vine thinks the graduates should be hired as "full team members, not assistants. They can work with individuals and groups and are able to achieve the goals set by the helping agencies." Dennis Kimberly, director of the Northeast Toronto Branch of the A.R.F. and a former teacher of the course, has a background as a therapist, street worker and community consultant. Working on his doctorate of social work, he feels the M.S.W. degree is the key to credibility. He equates the George Brown College addiction counsellors course with the social service worker programs offered at community colleges. "It covers the same general topics and methodology in terms of treatment, but with a more specific content. There is a heavy load of addiction counselling topics."

This special emphasis of the course has caused some re-thinking and re-definition of terms by everyone involved. Although the course arose out of an immediate need for specialists to meet the drug crisis, it now incorporates all aspects of addictions, including alcoholism. A recent graduate finds the course name—"Addiction Counsellors"—misleading. "I was trained as a mental health worker to deal with all sorts of things. The course is a progressive thing. It will change as the need changes." A former teacher, however, sees the addictions specialty as an asset. "No matter what level of training you have, you get very little training in addictions anywhere else. Professionals tend to shy away from 'drunks' and 'dope addicts'." Bill Vine believes the community still needs expertise in the

use and abuse of drugs. "There's something special about addictions. But they also need all the other counselling skills to identify the real problems."

Most graduates got their jobs through their field placement during the course and their summer job experience in between. Some are now supervising new students during *their* field placement in a continuing chain of experience. A liaison between teachers and the field is vital. Not only does it keep the course current, it also provides the connection that makes this course a unique combination of academic input and practical training.

Unlike rigidly-structured learning situations, this course flows and alters with the pliancy of changing social trends, with the fluid motion of human compassion. It is perhaps this human quality in the way the course is conducted that makes all its participants so eager. They aim towards—and enjoy absorbing—more knowledge about themselves and others, in order to substantiate their future roles of helping people in society.

The George Brown College addiction counsellors course has succeeded in fulfilling its original objectives: to provide skilled people for the community during an immediate crisis situation, and to build a foundation for training people to meet society's future needs. While the program trains counsellors in general therapy, educational and counselling techniques, specialization in addictions teaches them how to relate the problems they encounter with a patient's overall difficulty in society. At once specialists and generalists, graduates of the two-year course are trained to look at situations in their entirety, rather than isolating certain aspects of a patient's behaviour (such as addiction) and seeing it as the sum and root of the patient's problem. Most of all, the course is providing skilled, compassionate and enthusiastic people to help fellow human beings in our society.

Titles List

Alternatives to Drugs	V. Alton Dohner	Fall '72
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Bums, on Waking	James Dickey	Fall '72
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Therapy of Relationships, The	Melville Gooderham	Winter '72
Trapped Administrators and Evaluation	Reginald G. Smart	Winter '72

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The Addiction Research Foundation of Ontario, established in 1949, is an official government agency financed by annual provincial grants. Its purpose is to learn more about the effects of alcohol and other drugs and to develop improved ways of preventing and managing alcoholism and drug dependence. Helpful information about these matters is available from A.R.F. offices located in:

Belleville (962-9482)
Brantford (759-3930)
Chatham (354-1000)
Cornwall (932-3300)
Guelph (821-9661)
Hamilton (525-1250)
Kapuskasing (335-6081)
Kenora (468-6372)
Kingston (546-4543)
Kirkland Lake (567-4242)
Kitchener (579-1310)
London (433-3171)
Mississauga (270-1431)
Niagara Falls (356-7451)
North Bay (472-3850)
Oakville (845-6854)
Orangeville (941-6261)
Orillia (325-6161)
Oshawa (576-6277)
Ottawa (733-8343)
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Pembroke (732-2811)
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Sudbury (675-1195)
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